



Geographic Information System

**Zonal Statistics & Map Layout
Lab Practice**

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National Taiwan Normal University



Outline

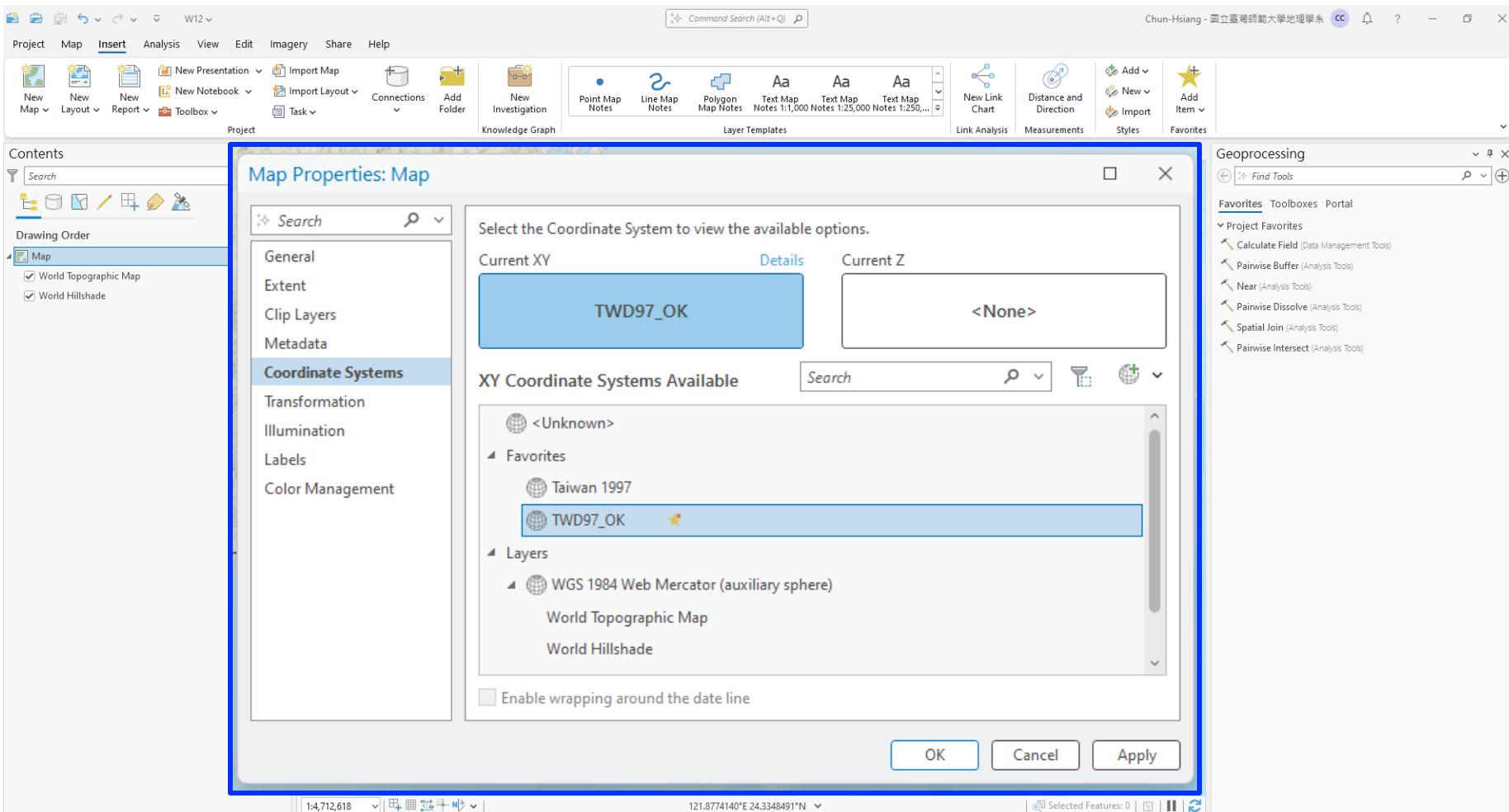
- DEM Data Processing
- Characterize the Geomorphology of Taipei City
- Plot a Map



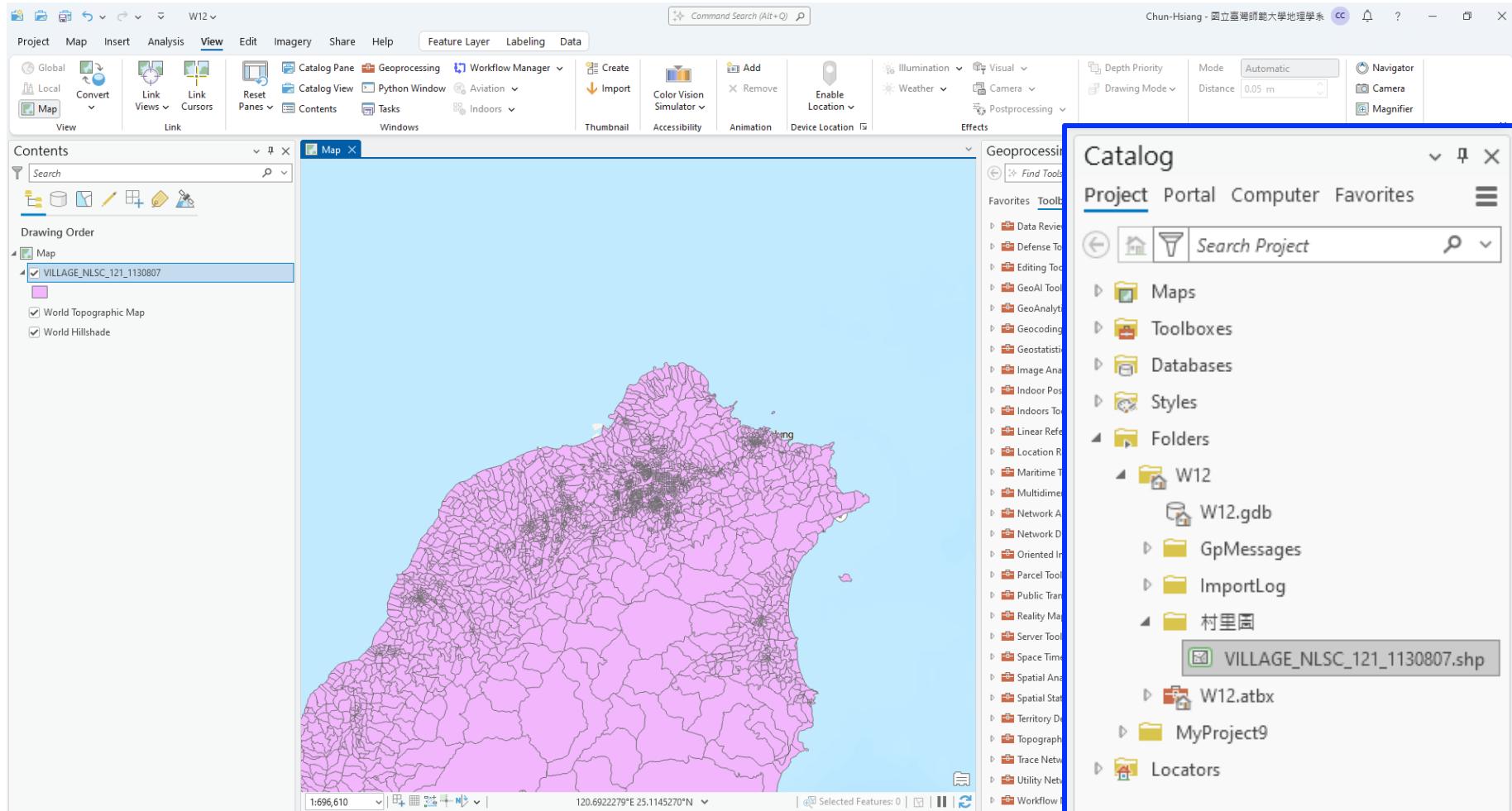
Initial Settings (...)

- 1) Set up the CRS of the map
- 2) Load Taiwan Village Data and Export Taipei Village Data
- 3) Mosaic To New Raster to combine all DEM data
- 4) Clip Raster with Taipei Village Boundary
- 5) Compute Contour
- 6) Compute Hillshade
- 7) Compute Slope
- 8) Feature To Point for Taipei Village Data
- 9) Compute Viewshed
- 10) Create Chart
- 11) Map Layout

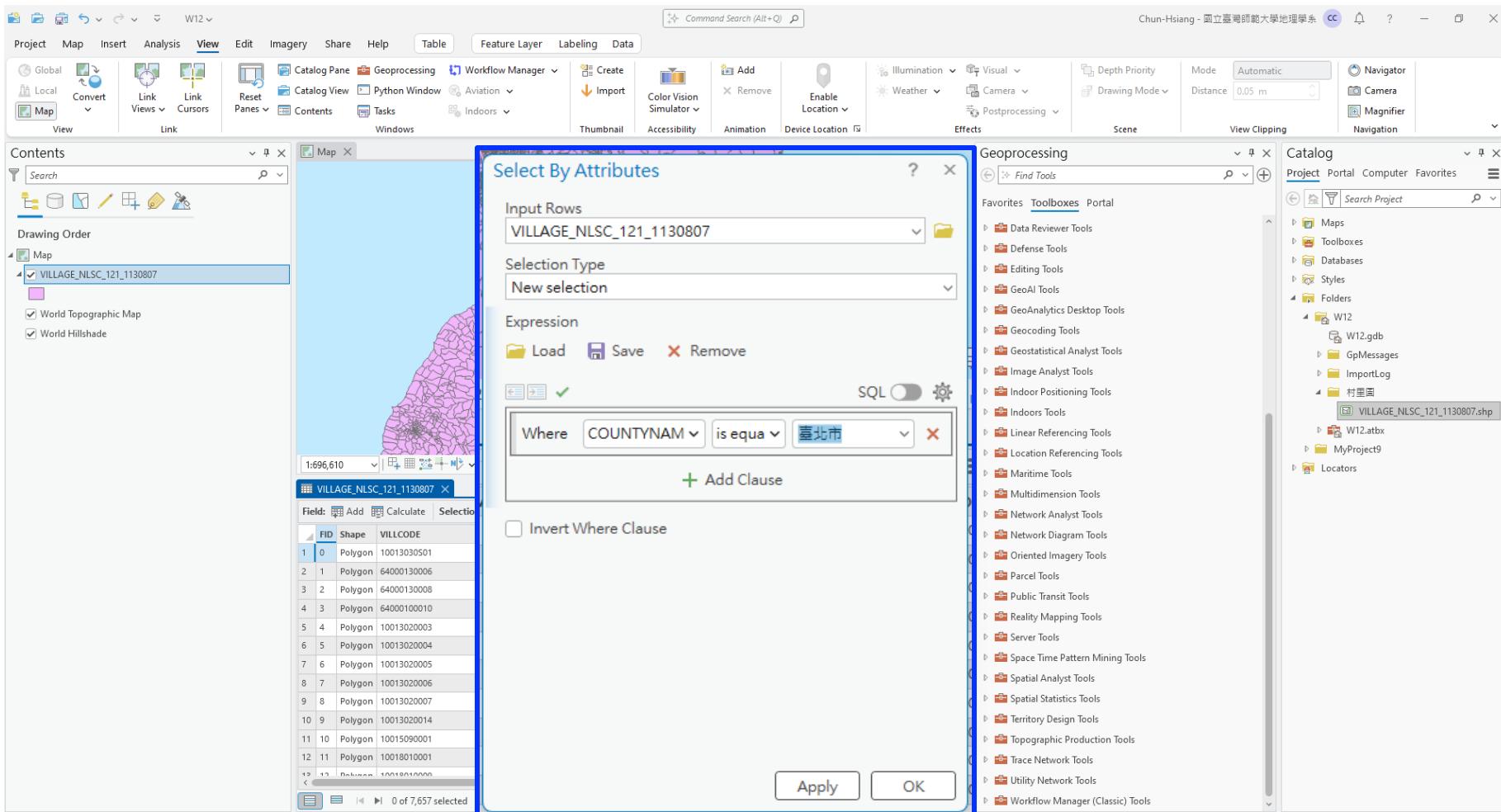
Map Settings



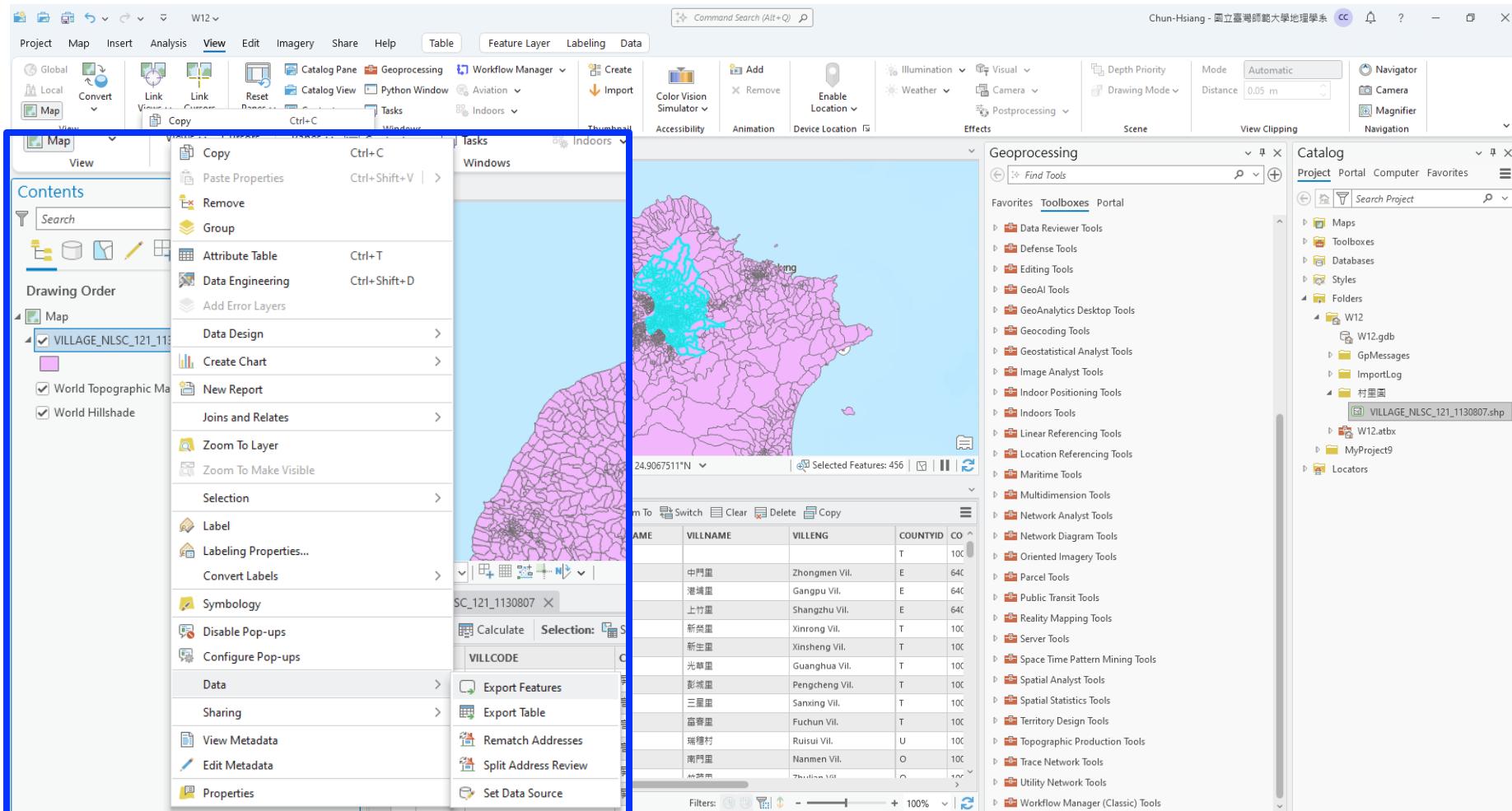
Import Taipei Village Data



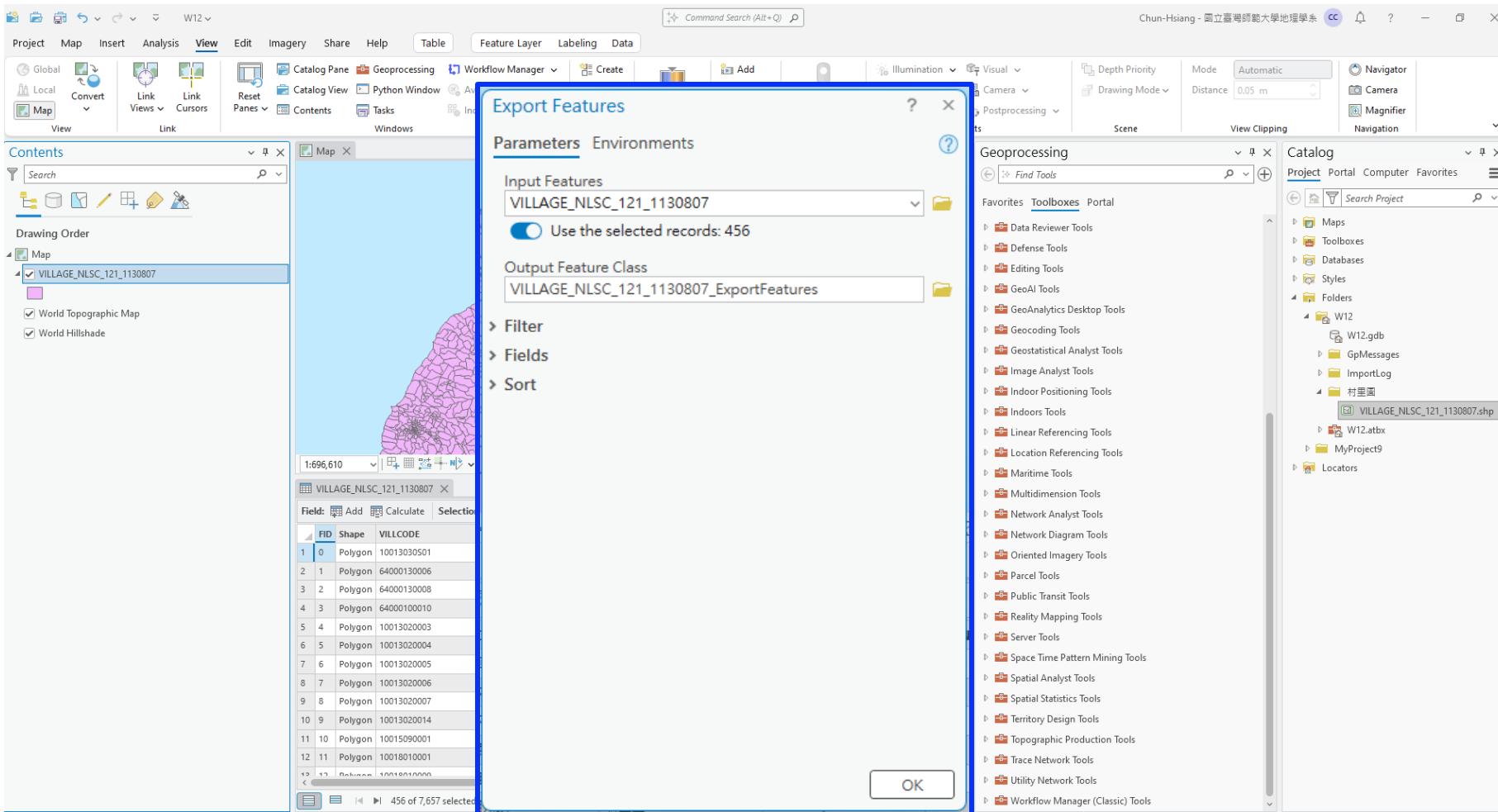
Select By Attribute :: Taipei



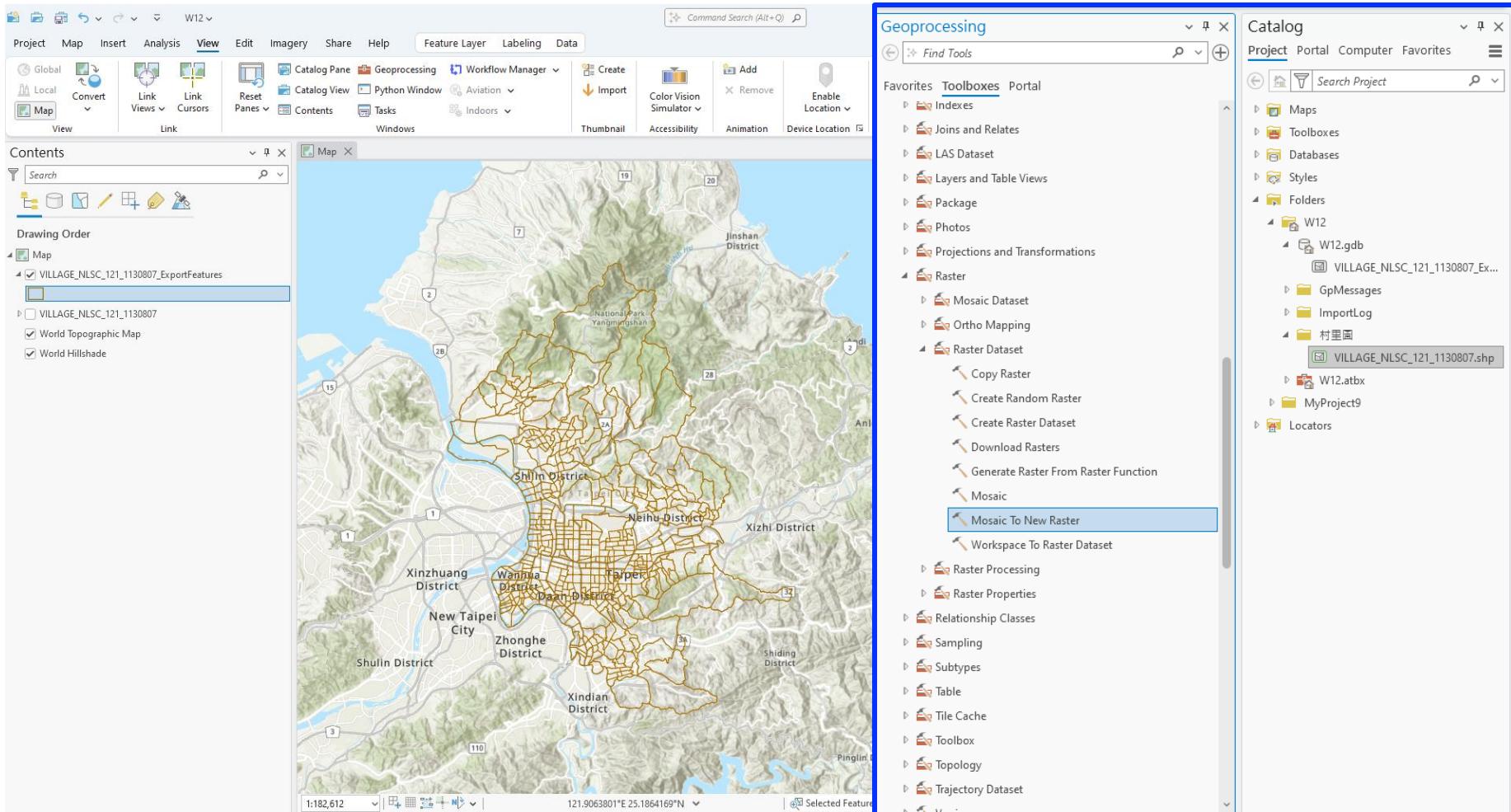
Export Features



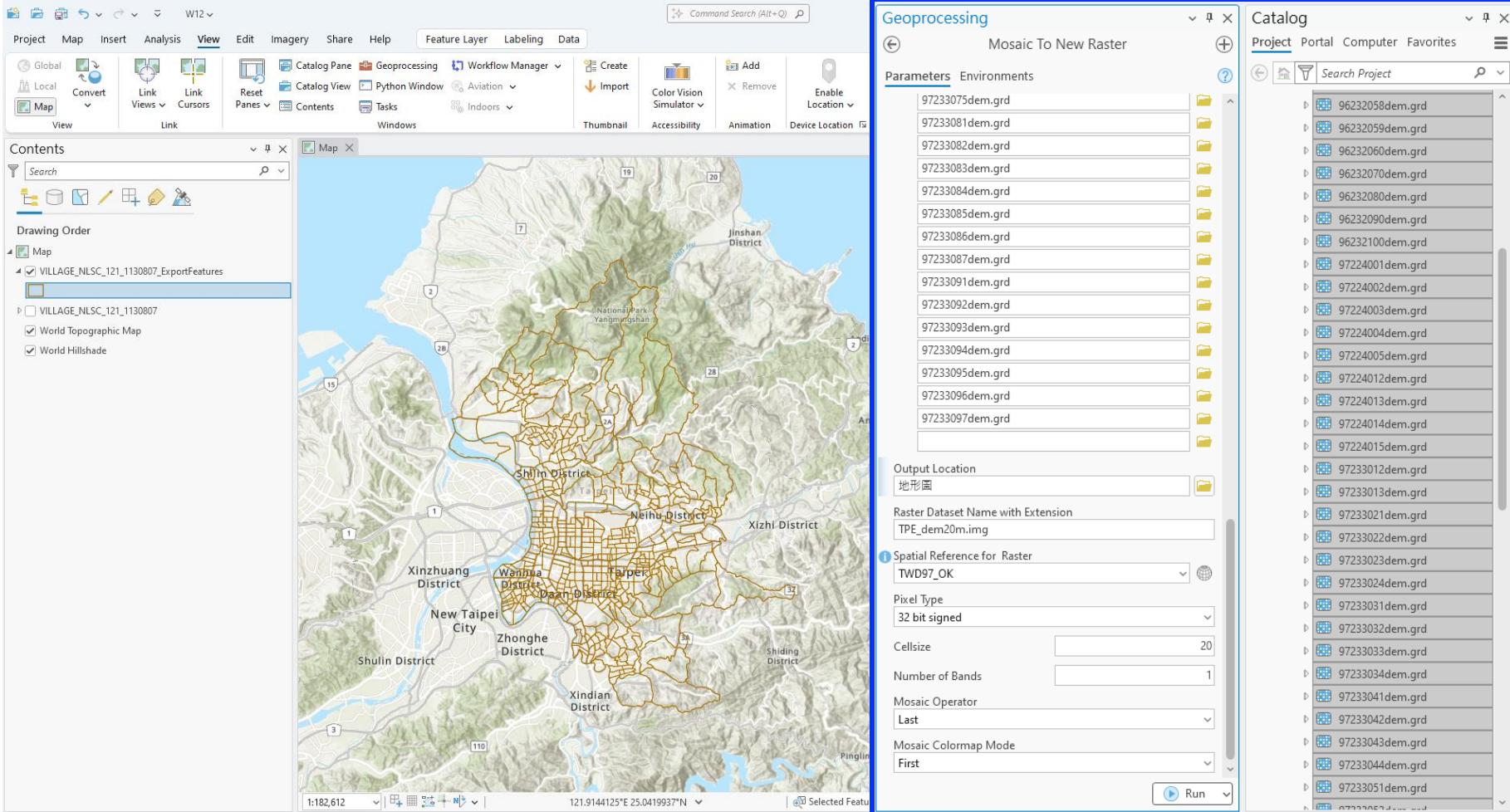
Export Features



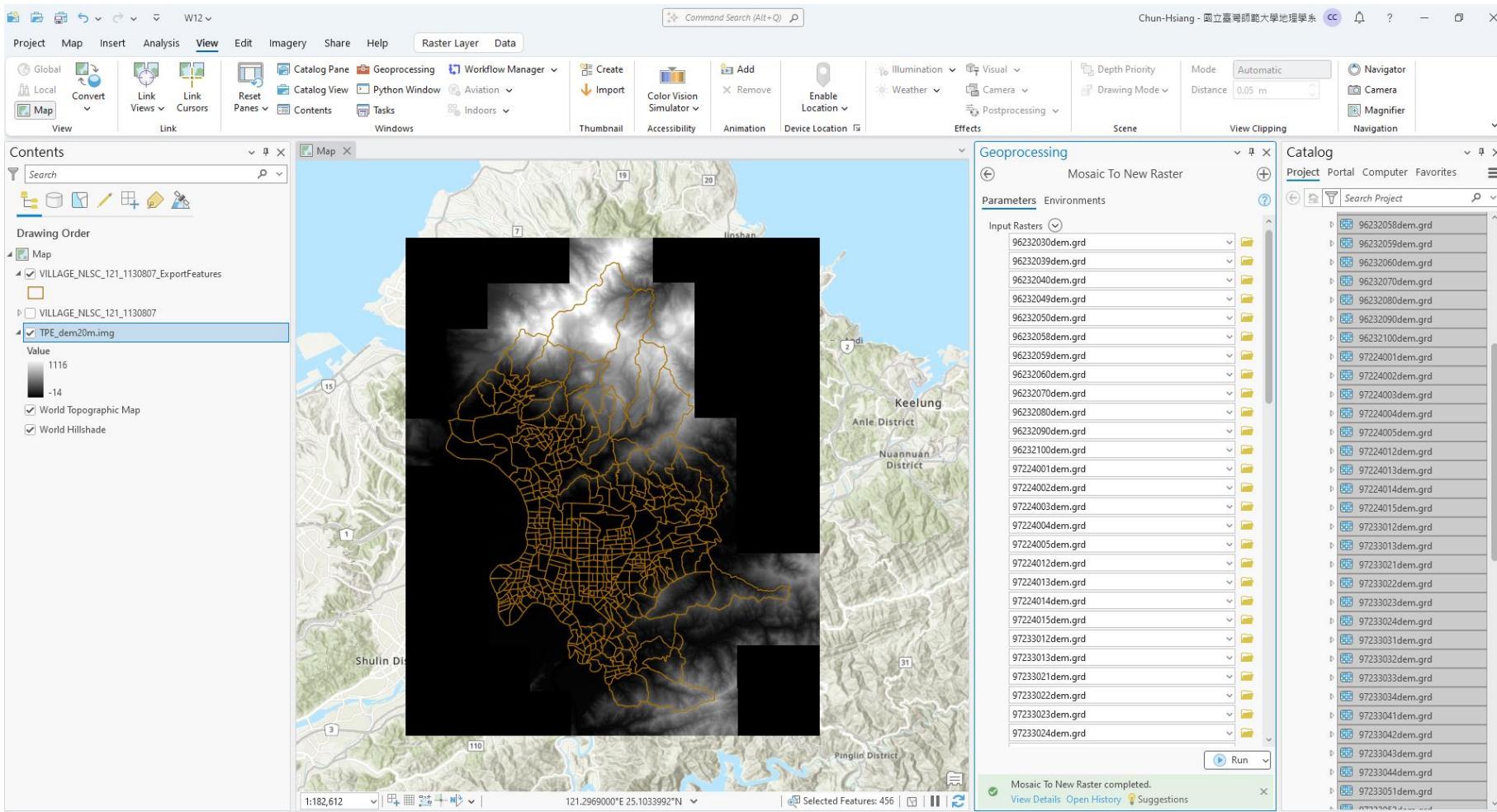
Mosaic To New Raster



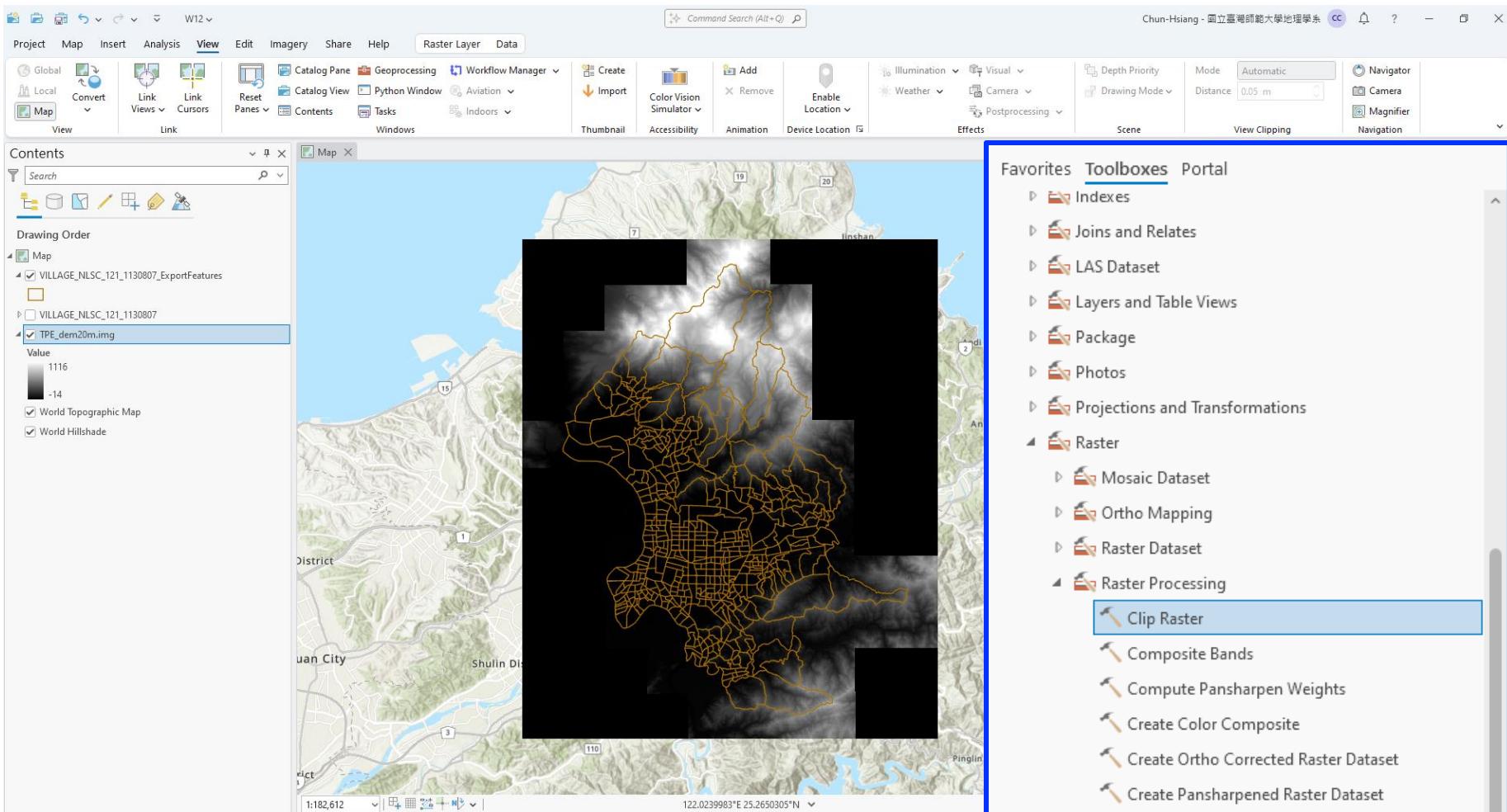
Mosaic To New Raster



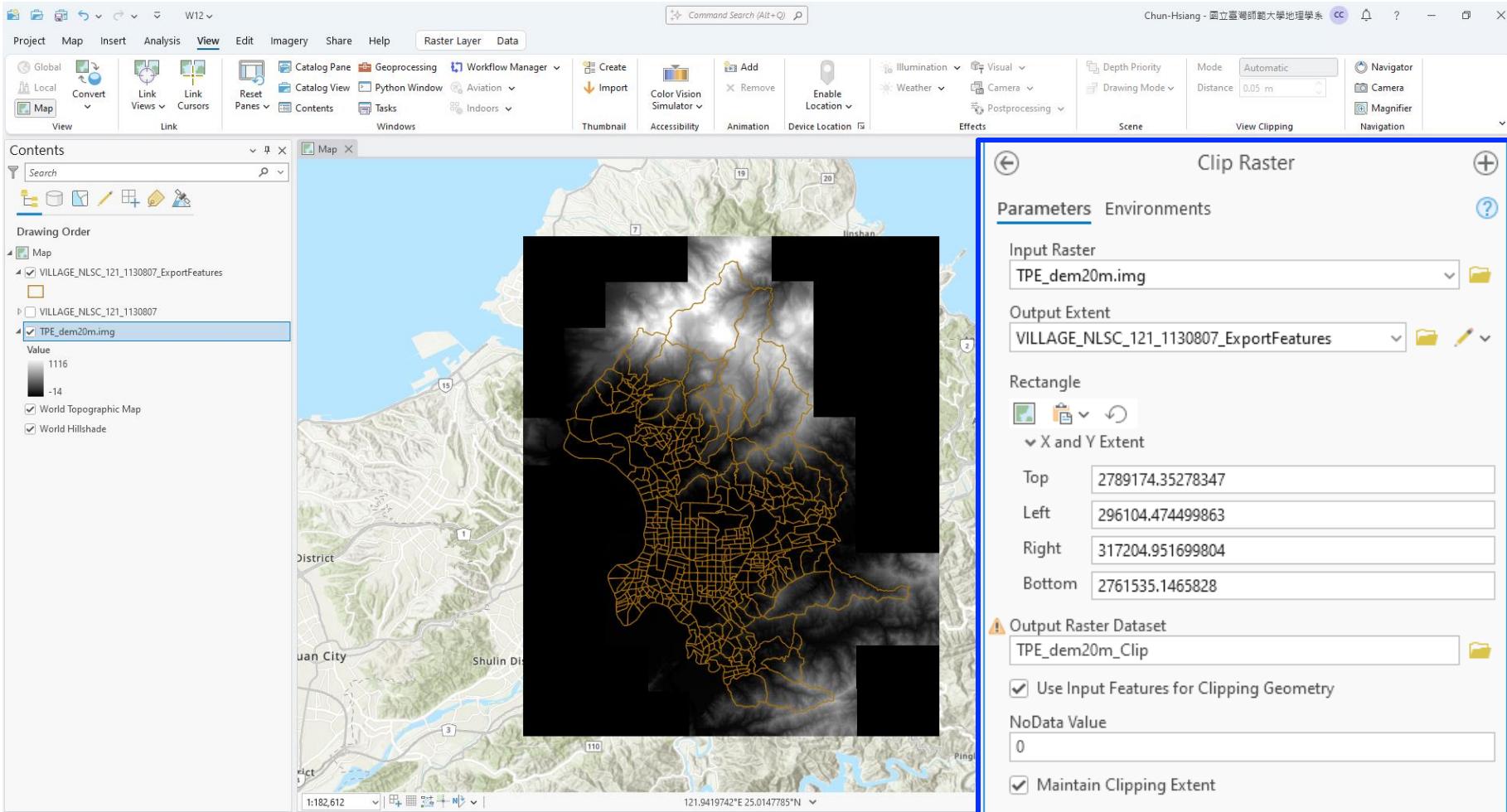
Mosaic To New Raster



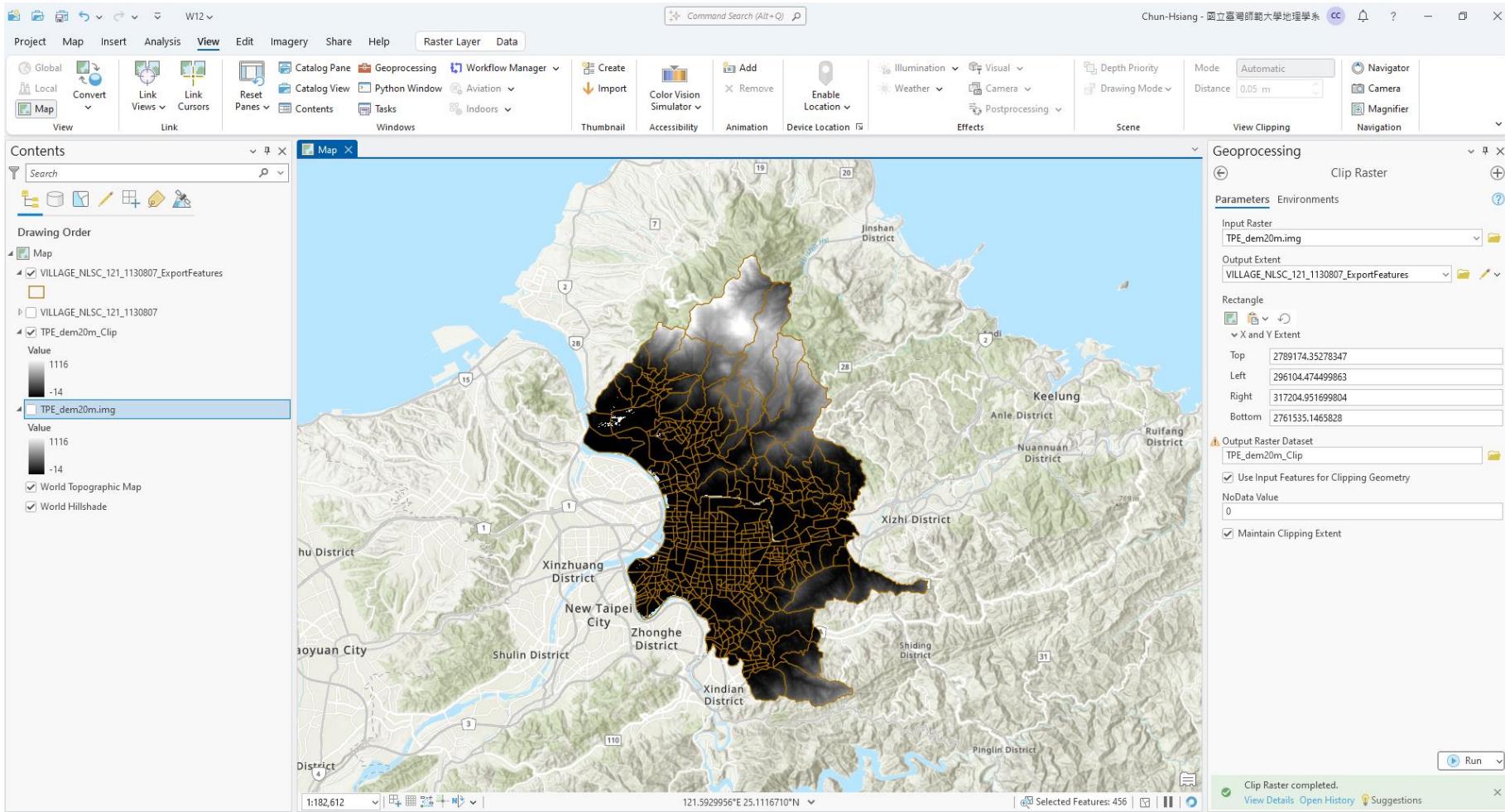
Clip Raster



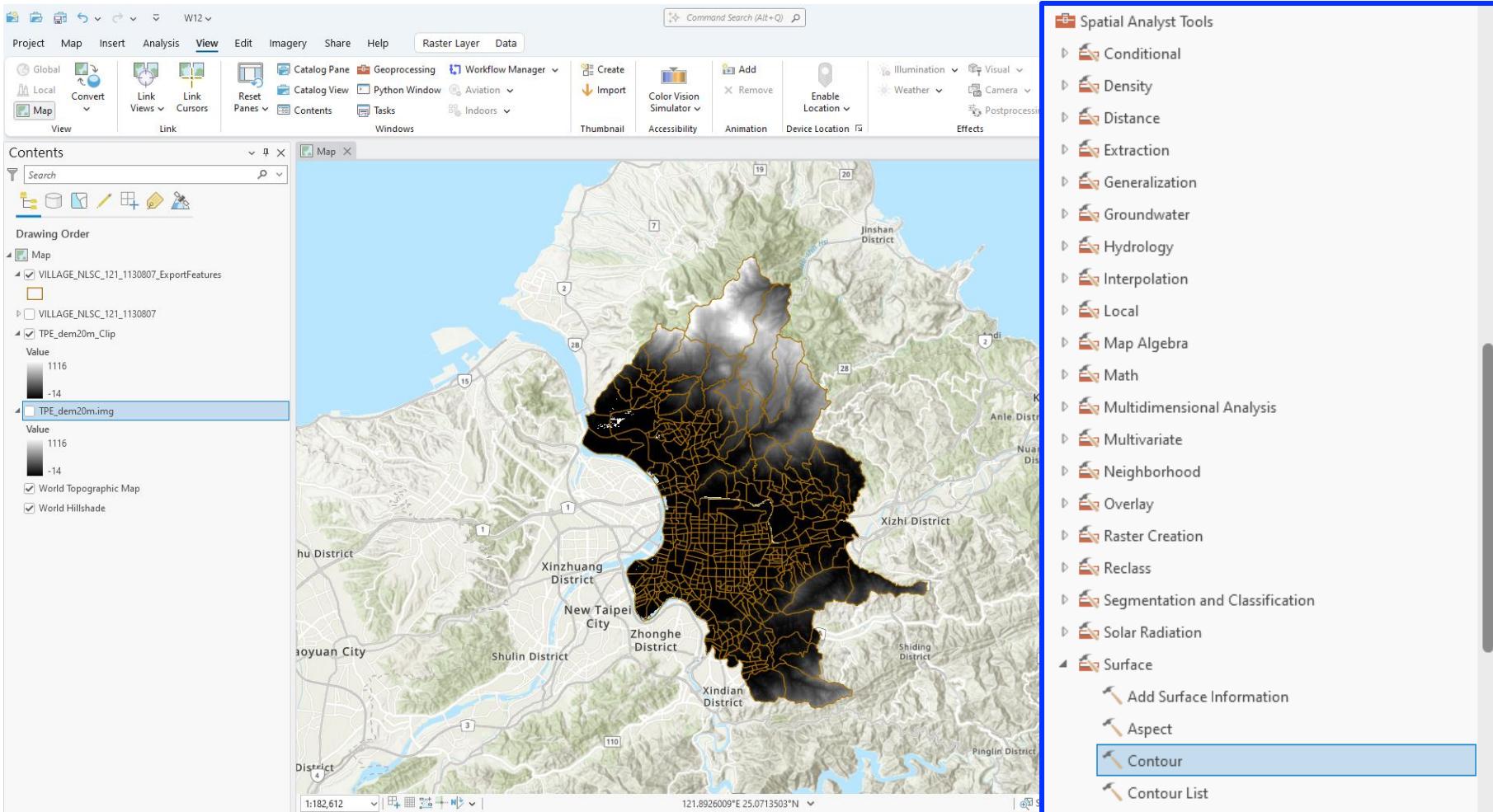
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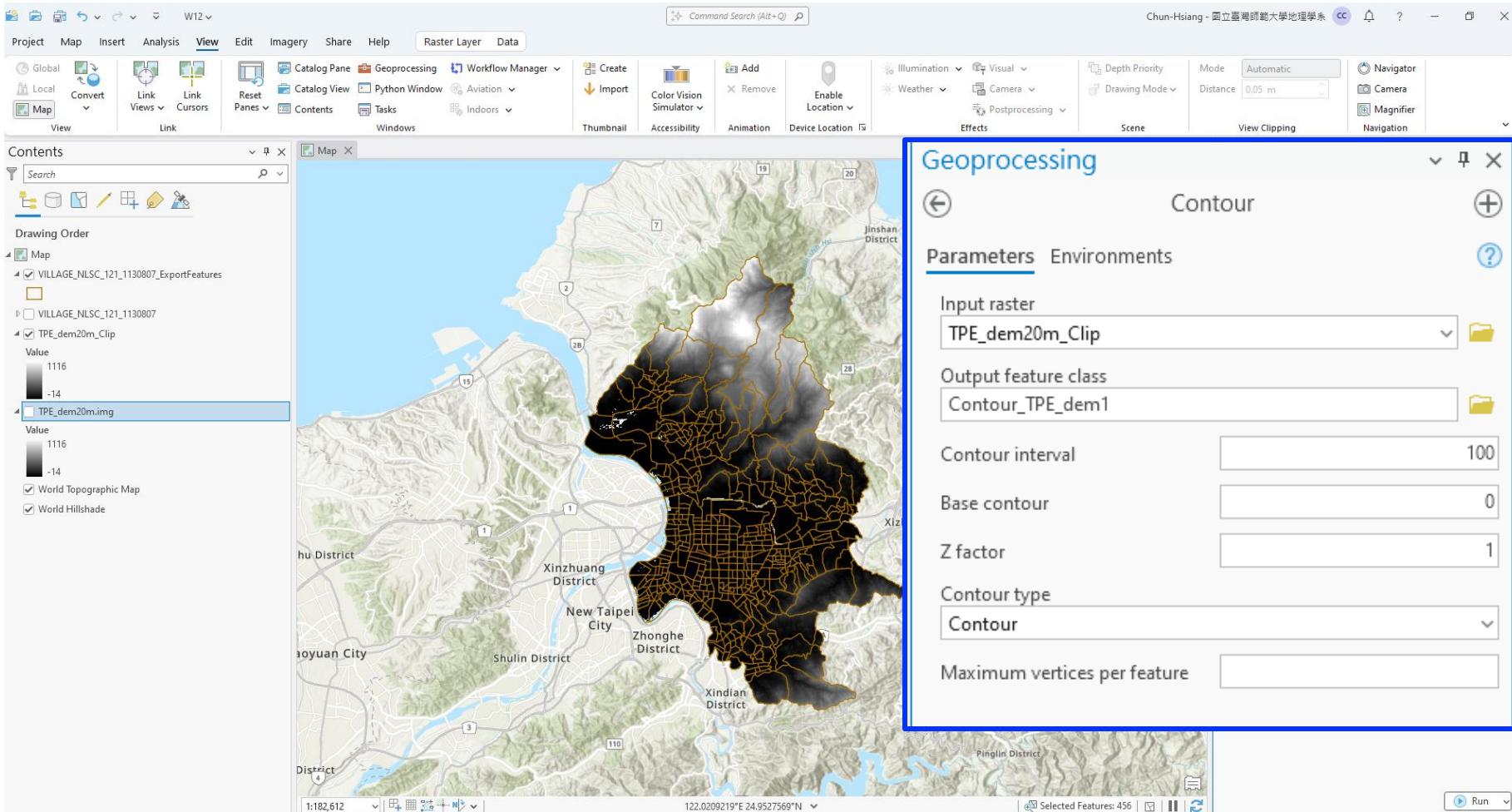
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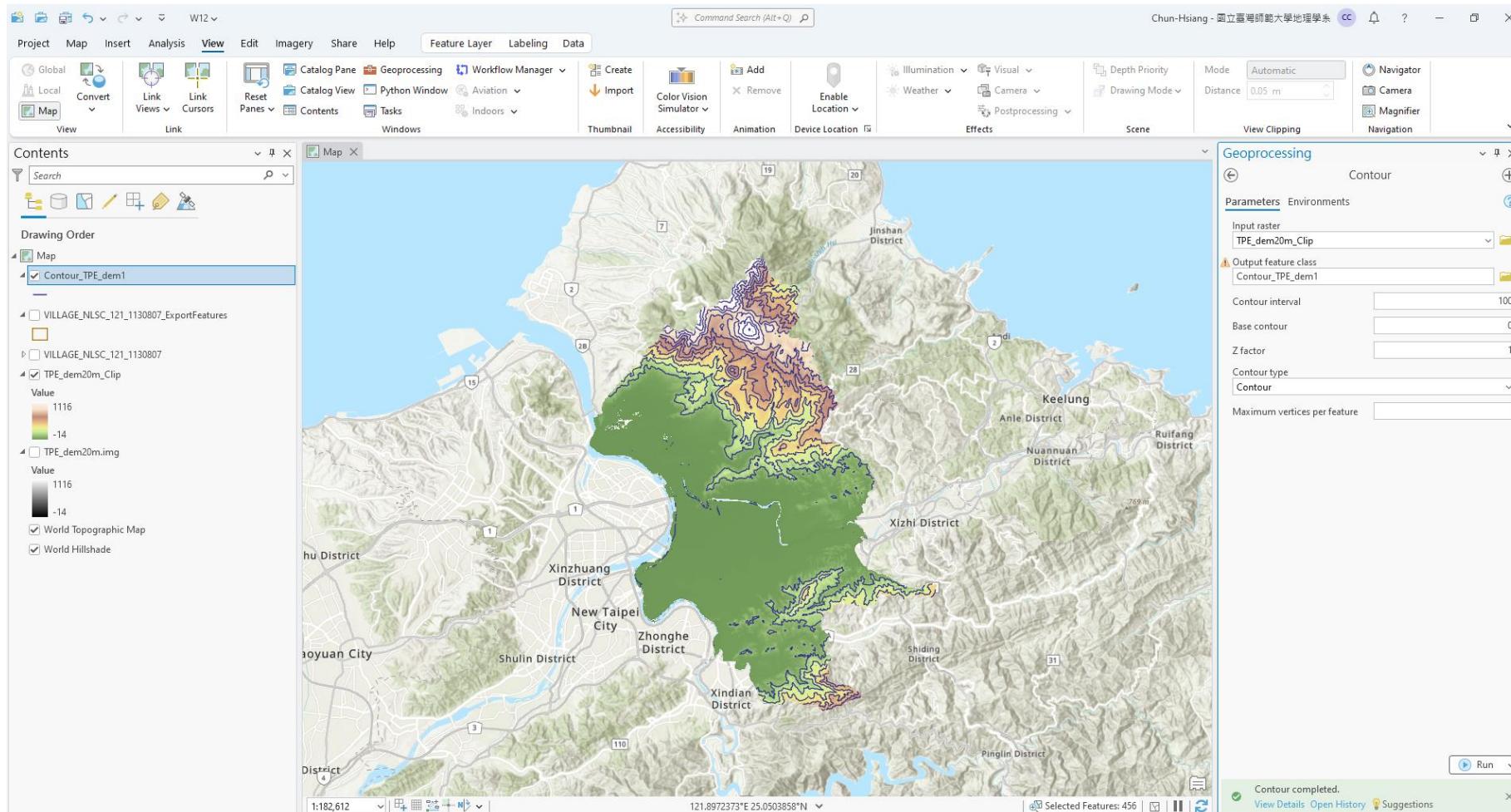
Contour



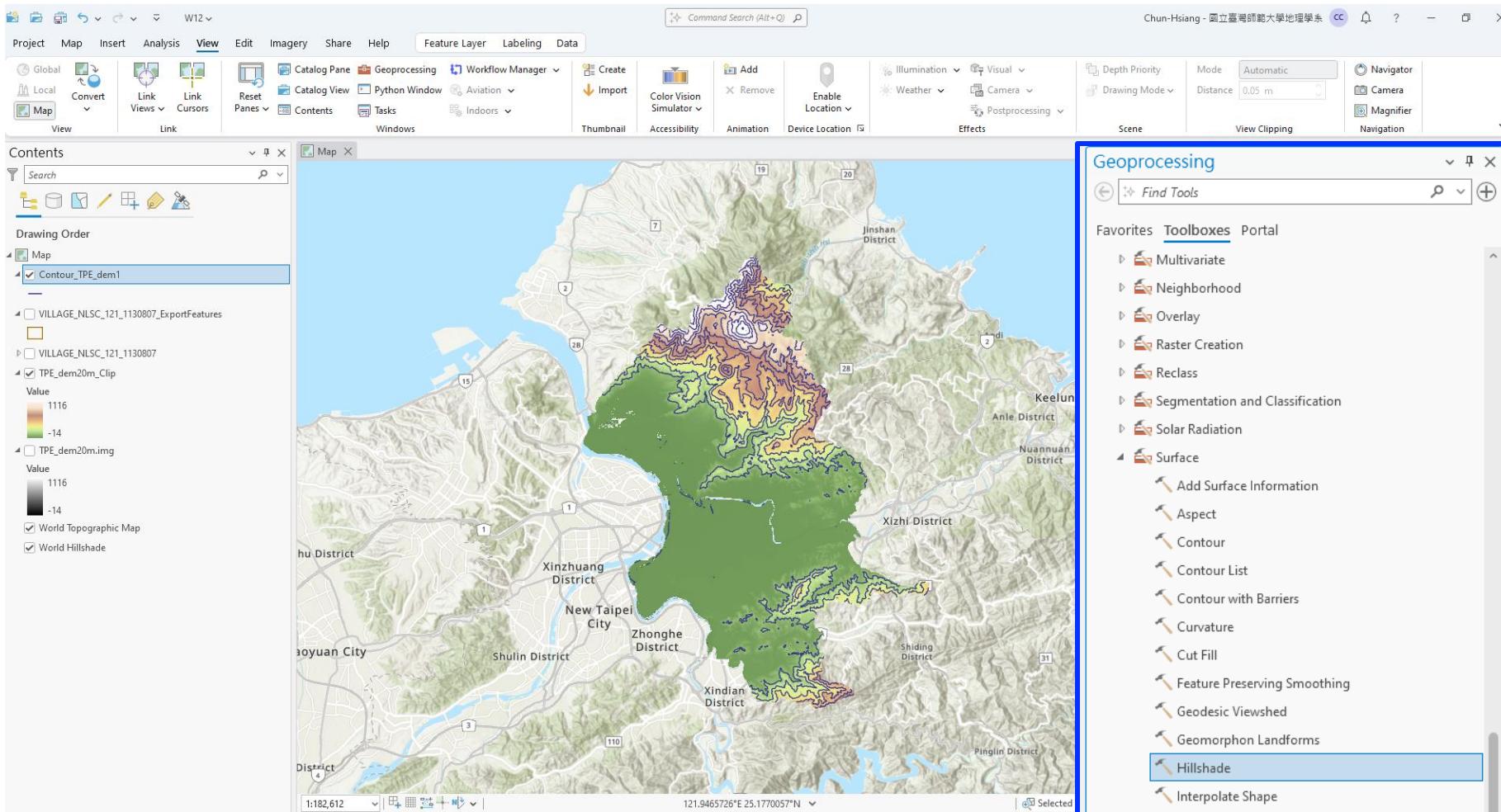
Contour



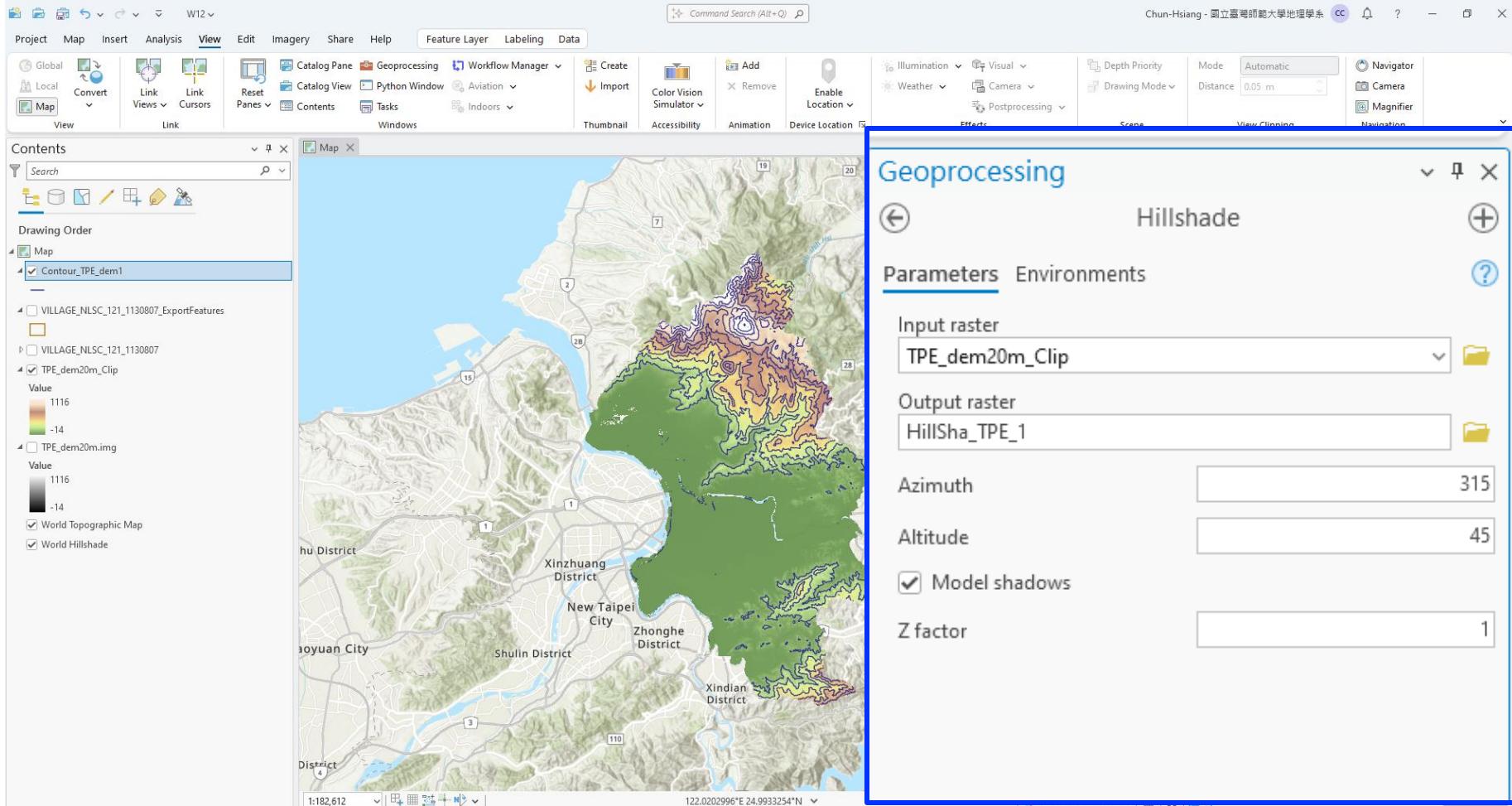
Contour



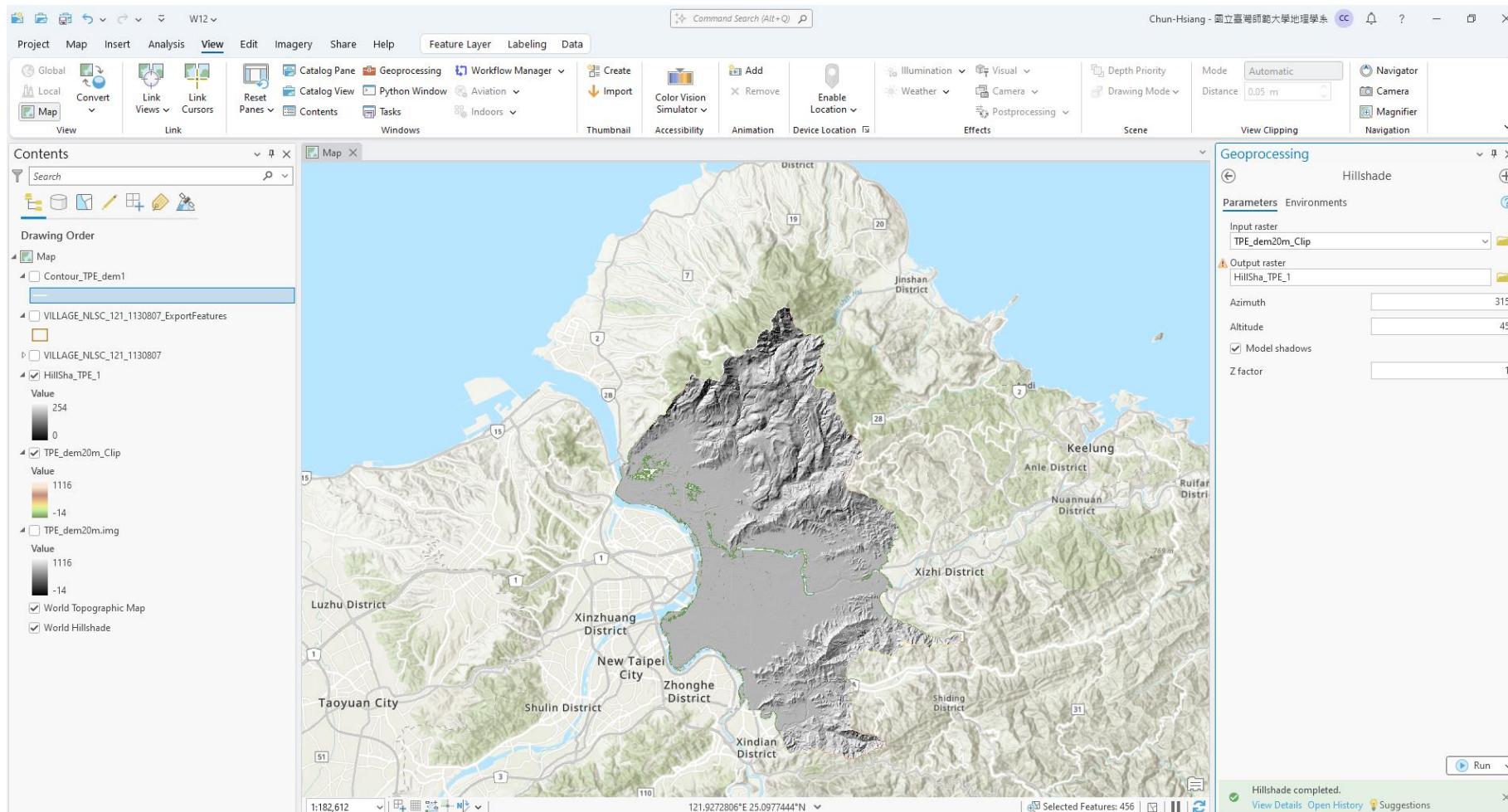
Hillshade



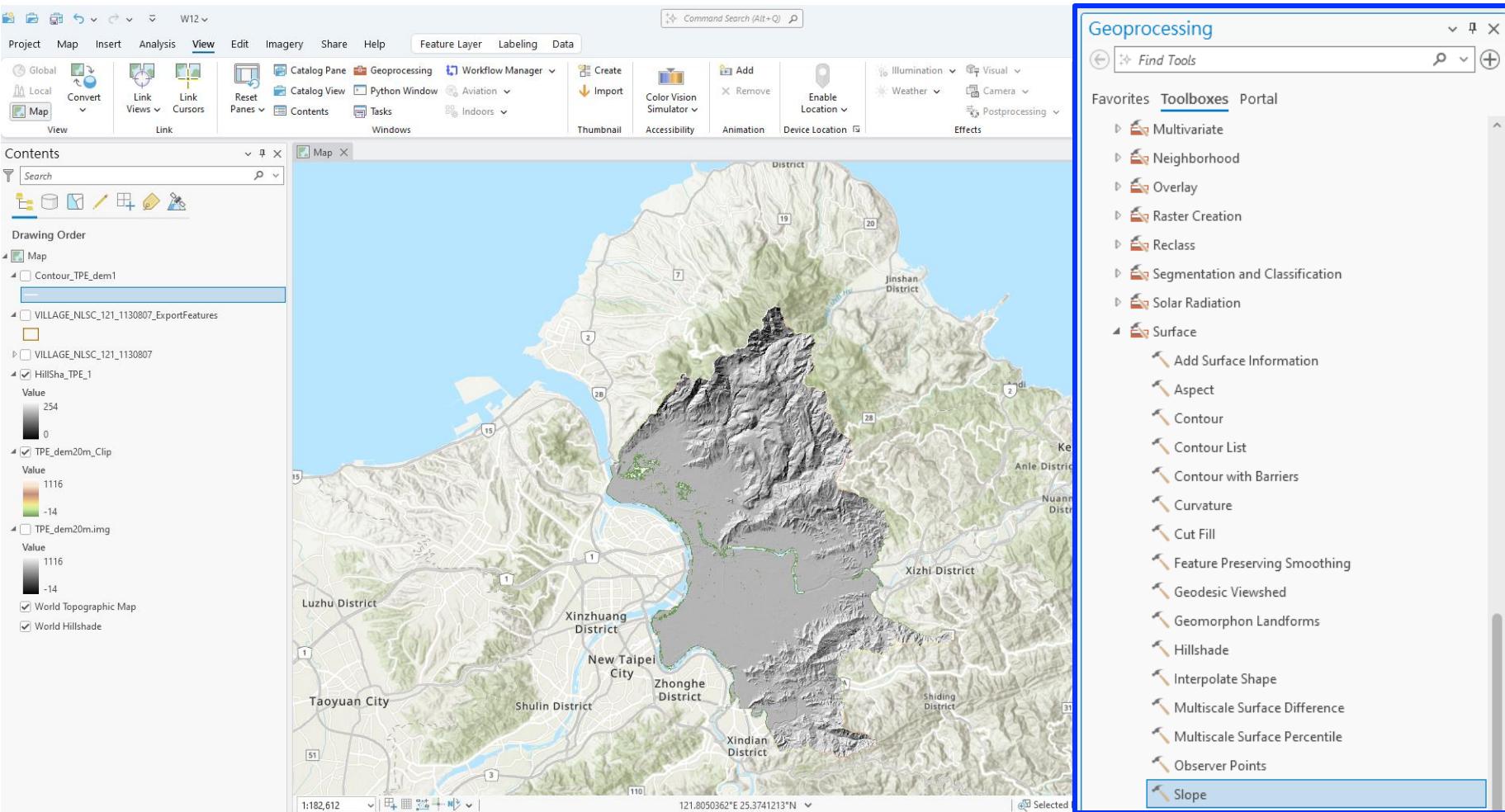
Hillshade



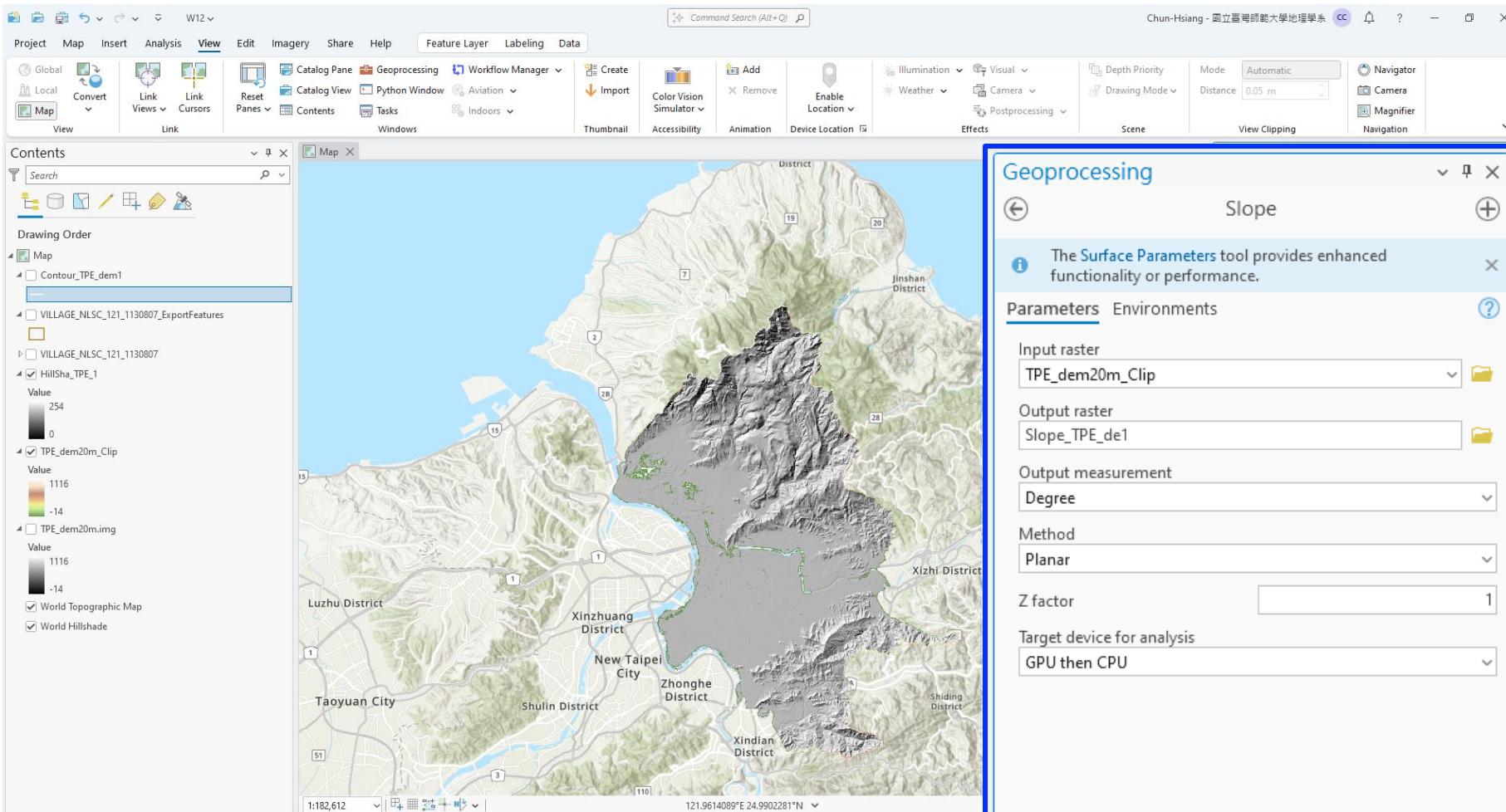
Hillshade



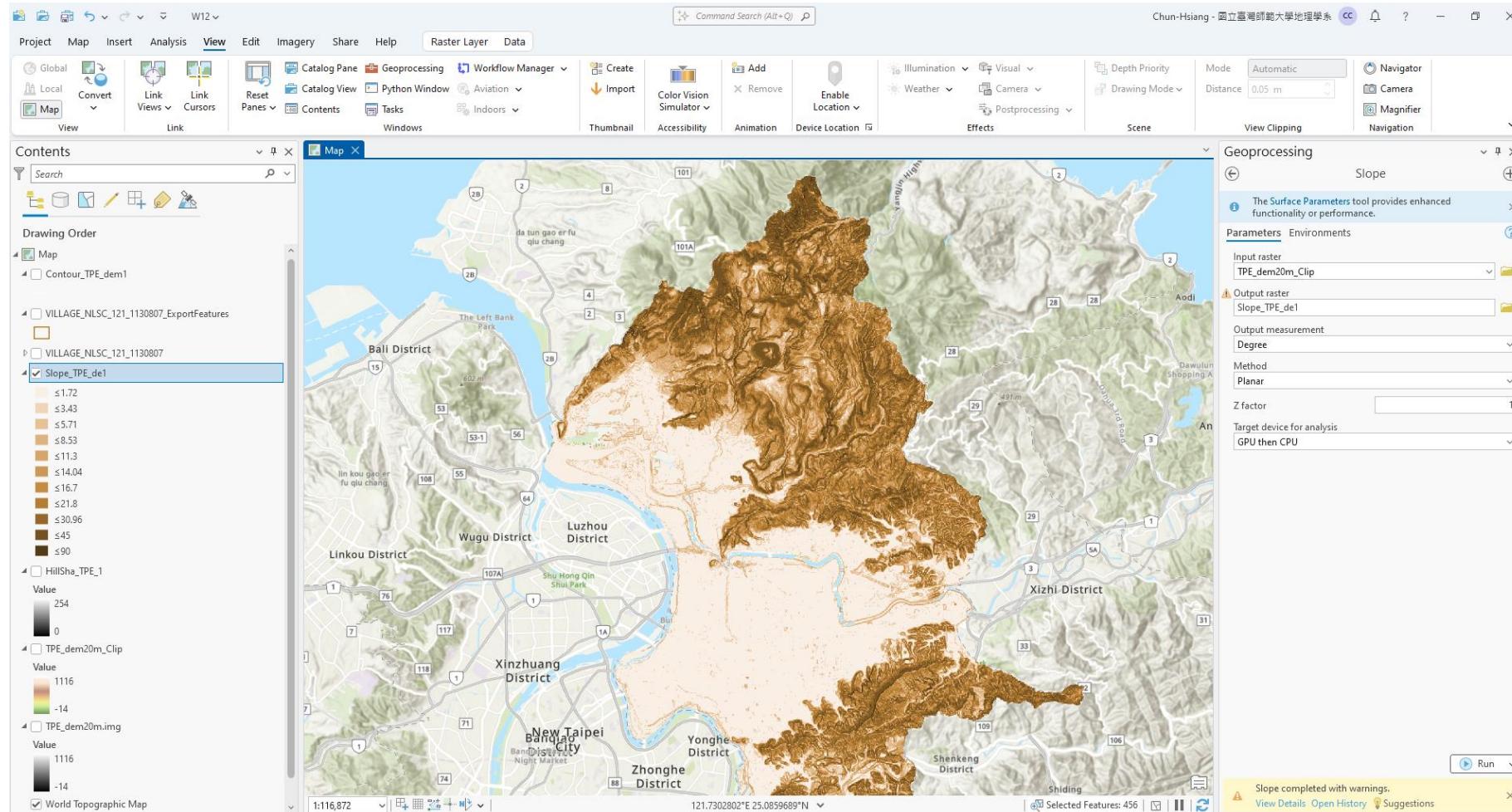
Slope



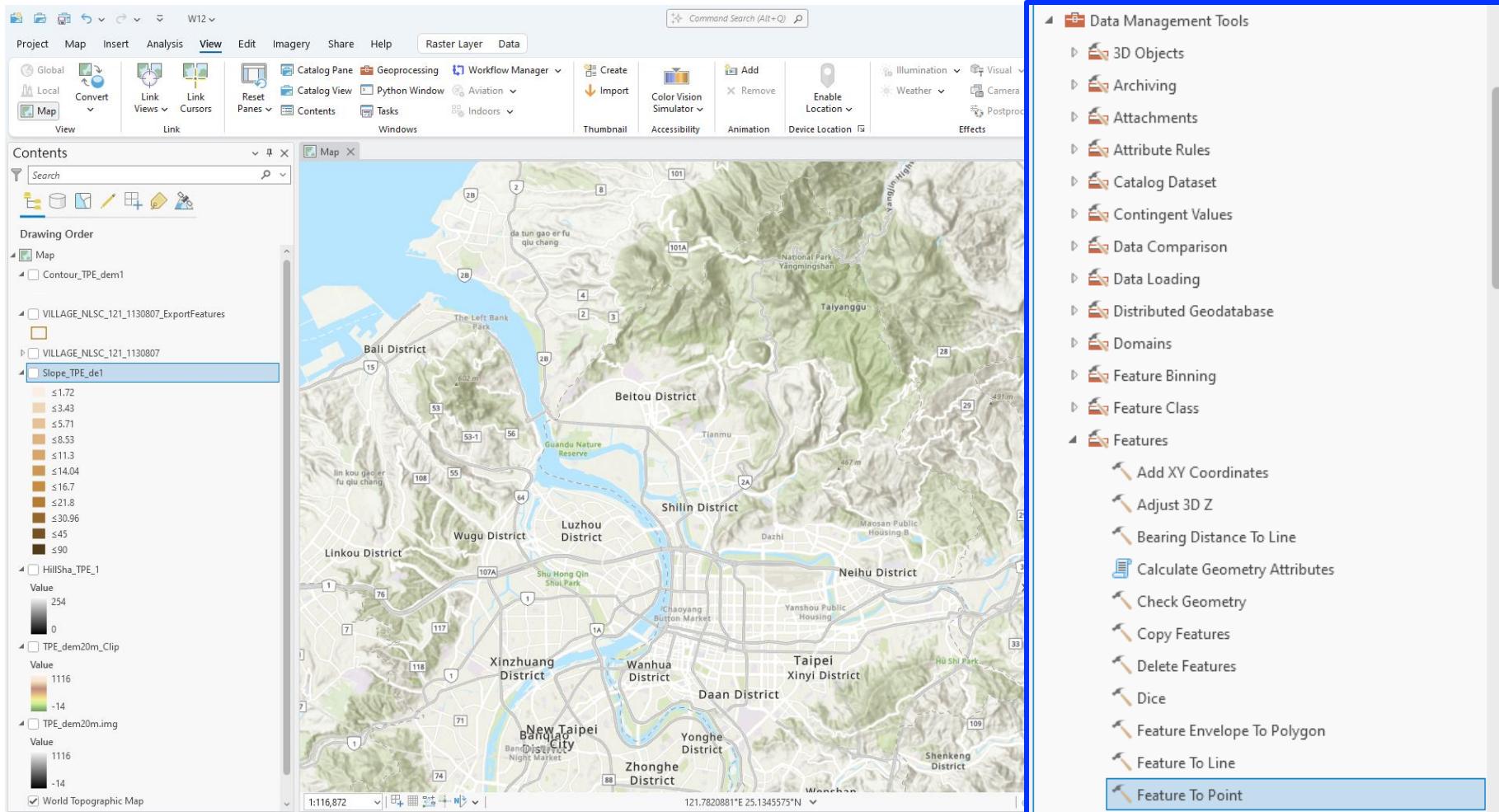
Slope



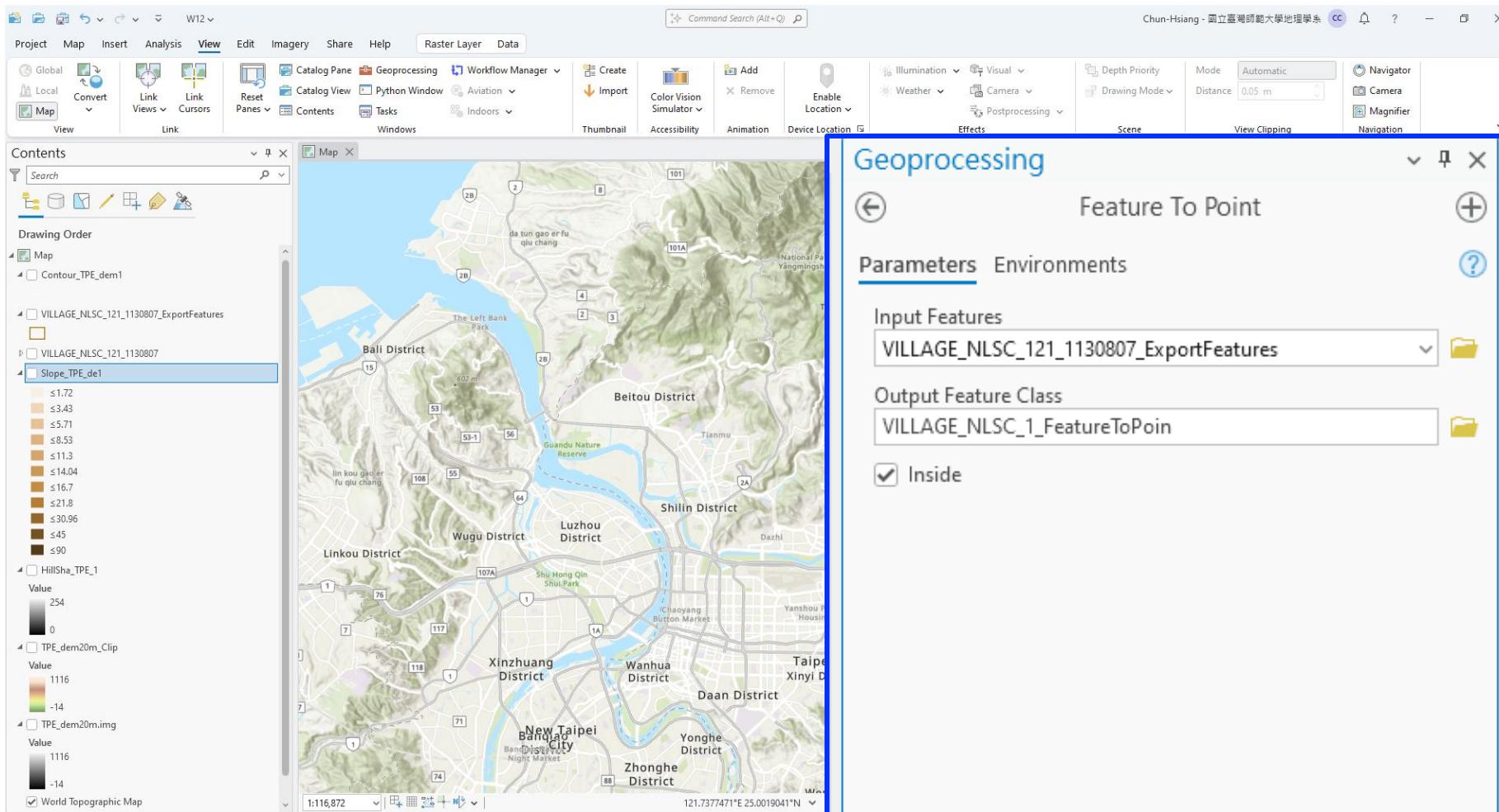
Slope



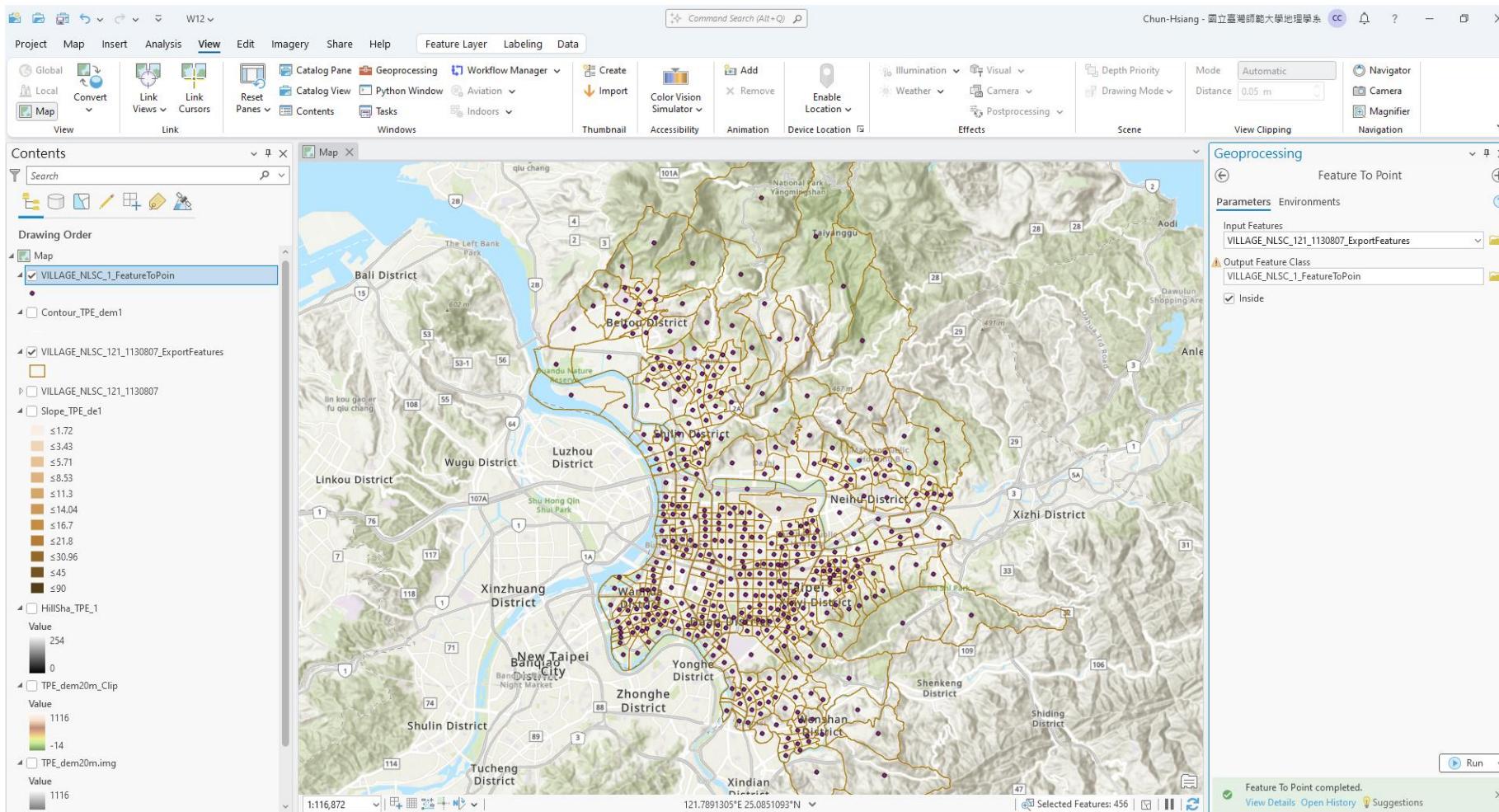
Feature To Point



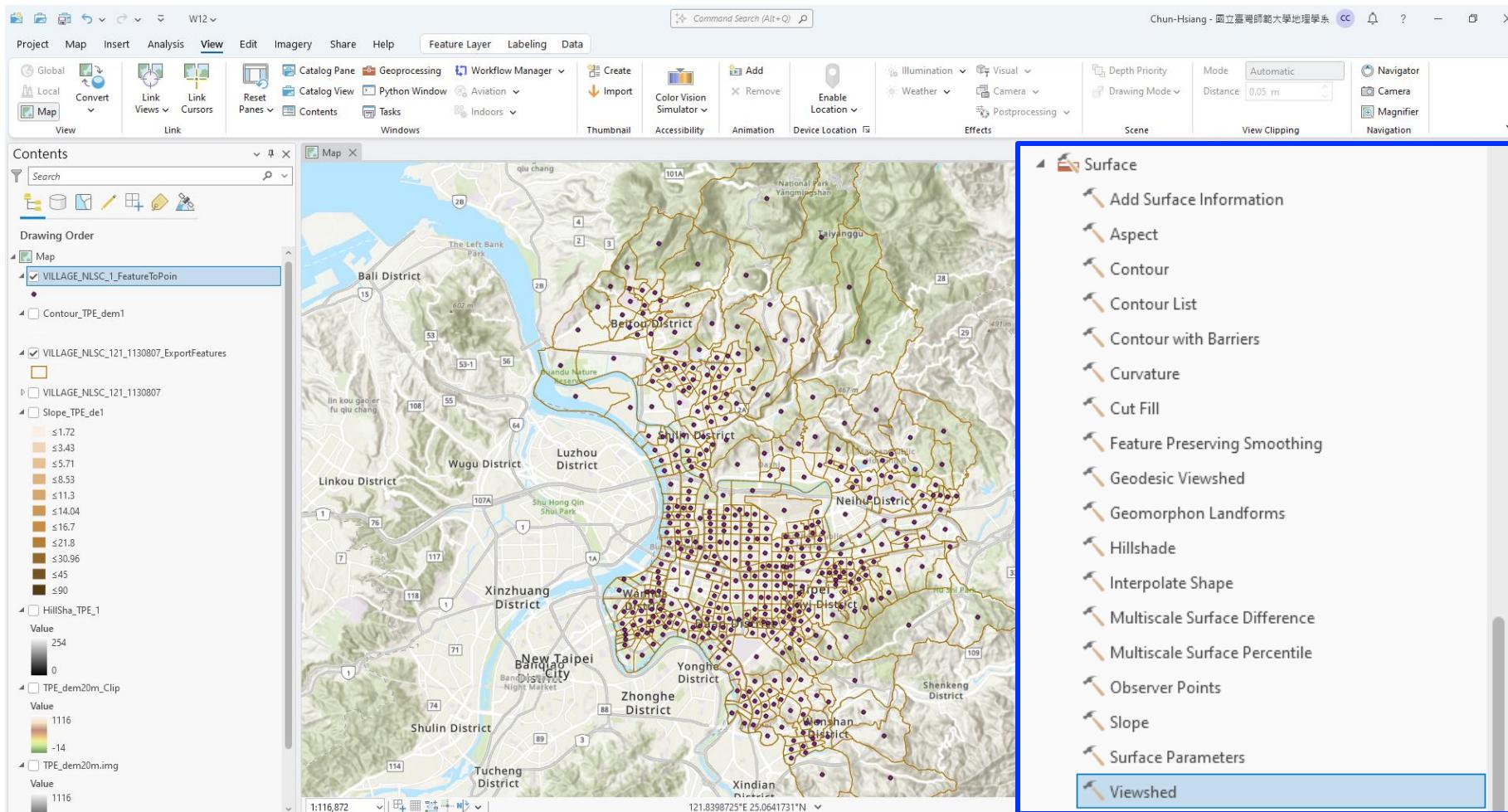
Feature To Point



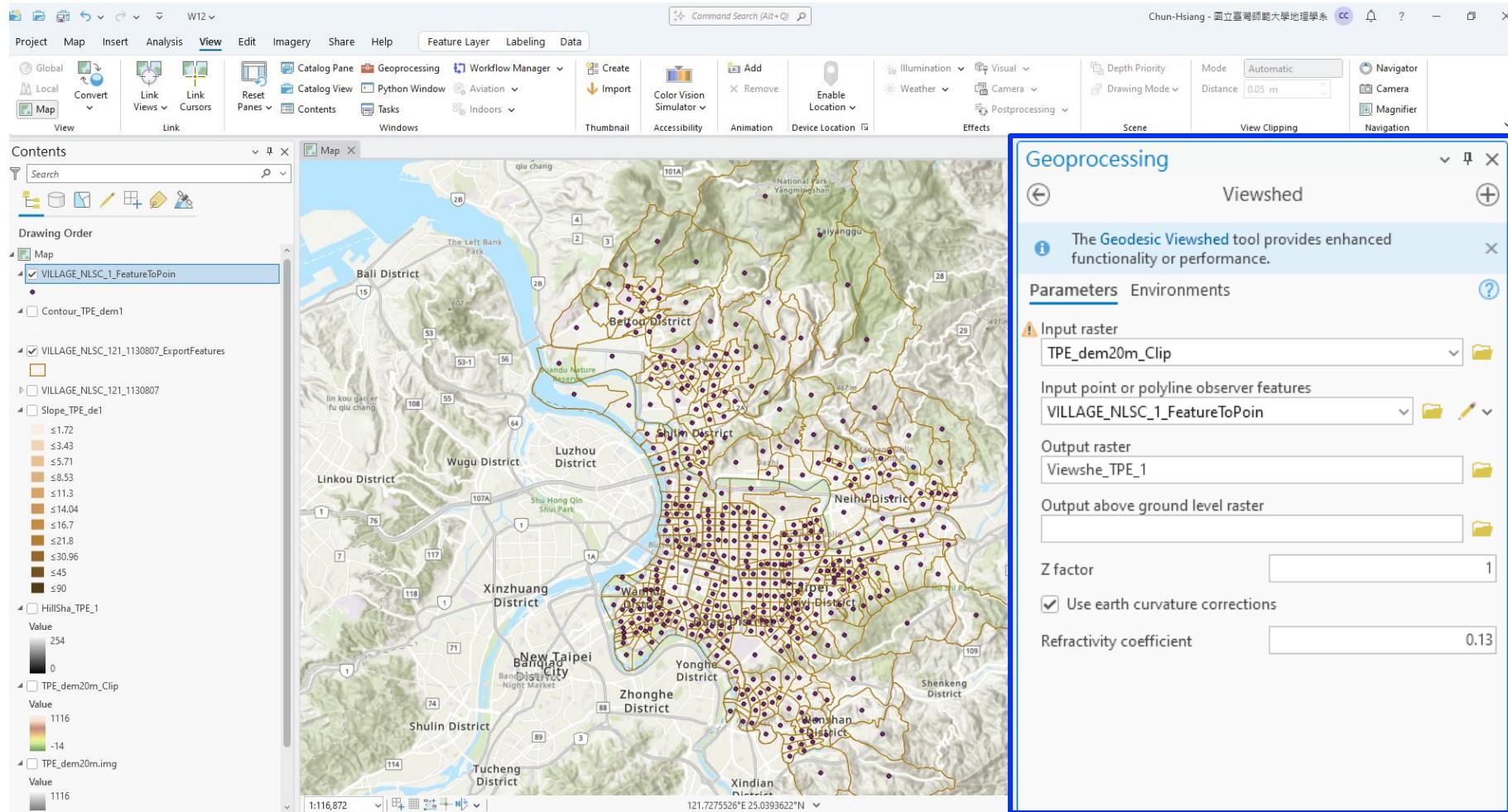
Feature To Point



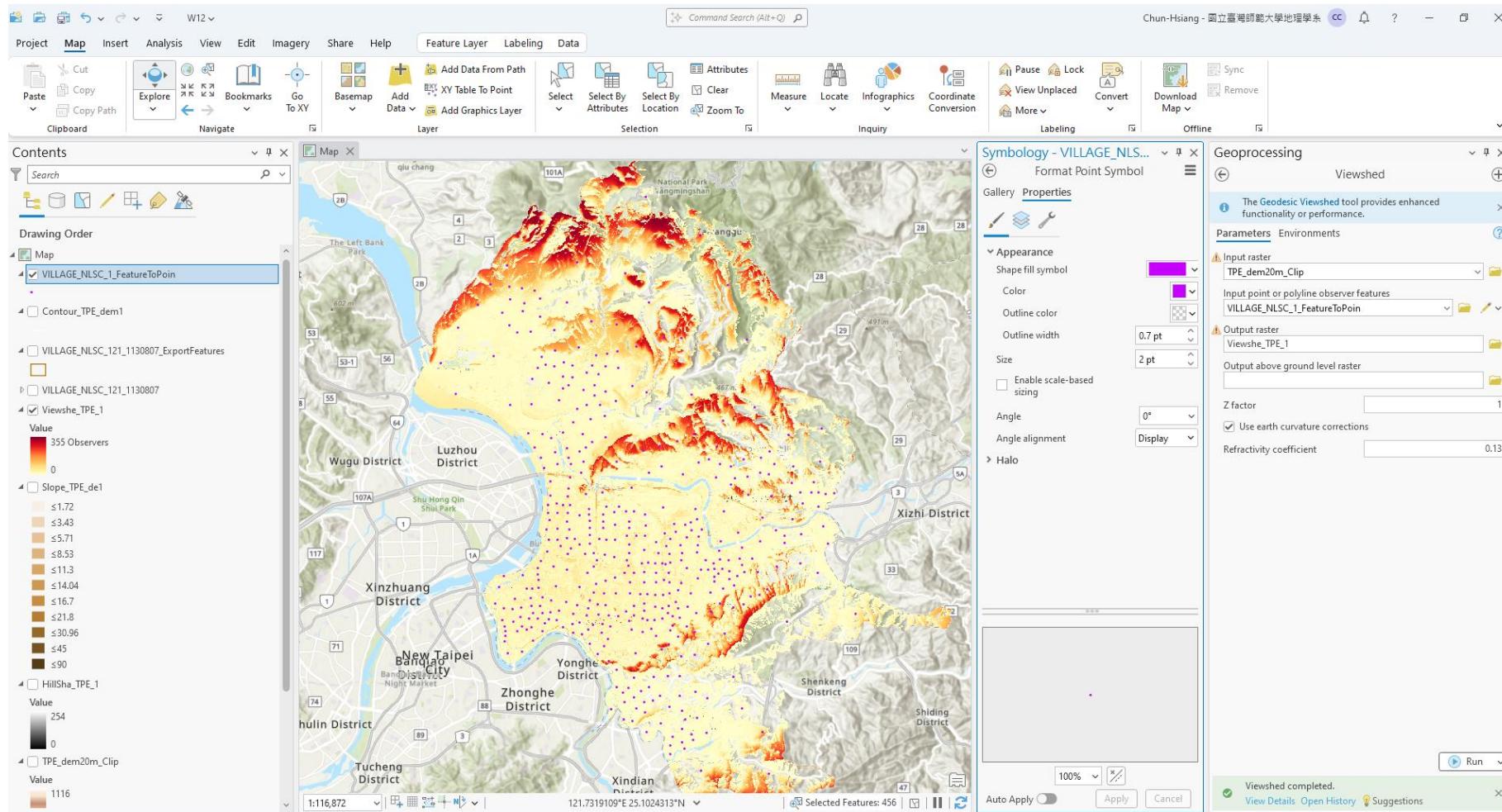
Viewshed



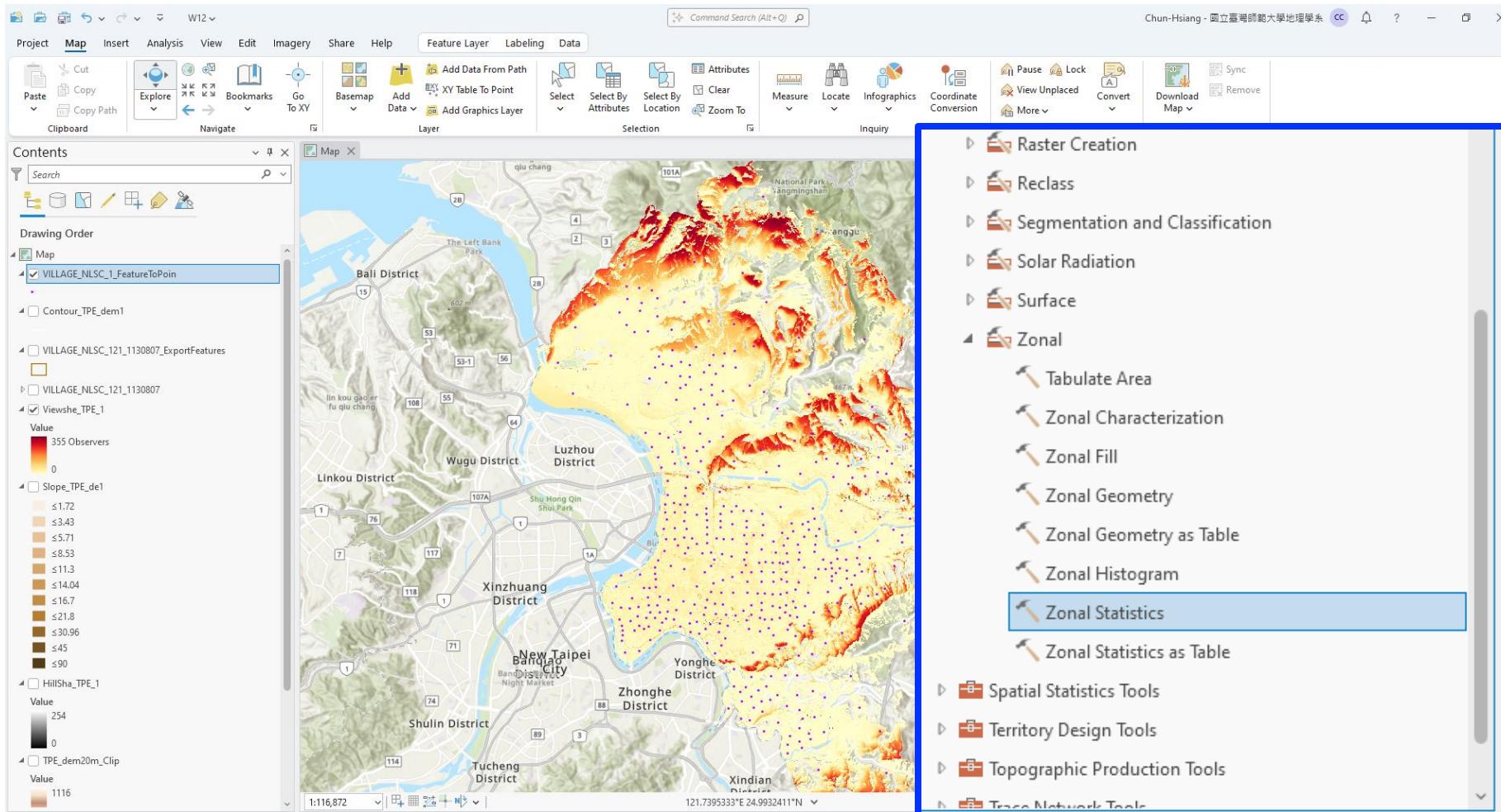
Viewshed



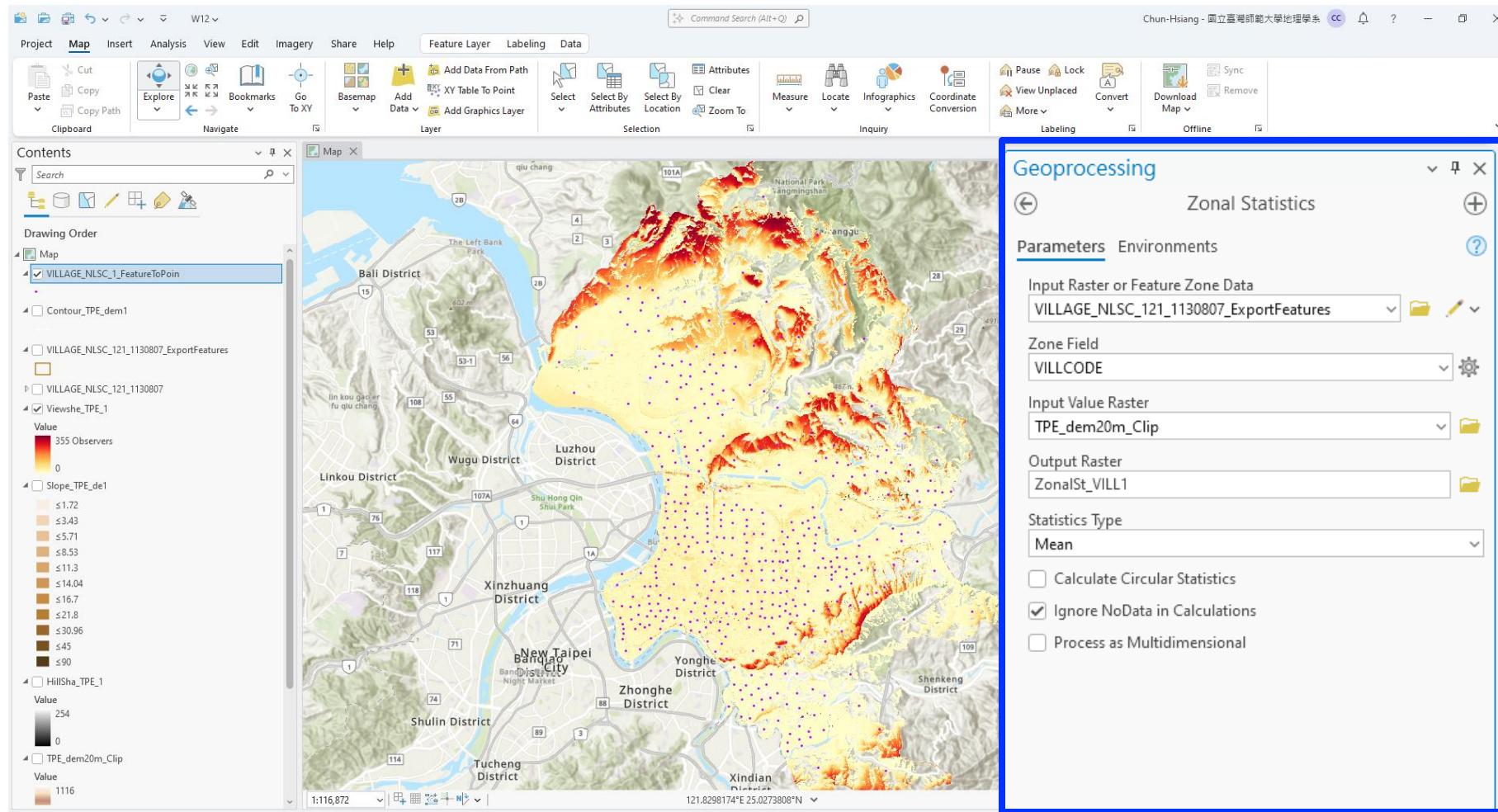
Viewshed



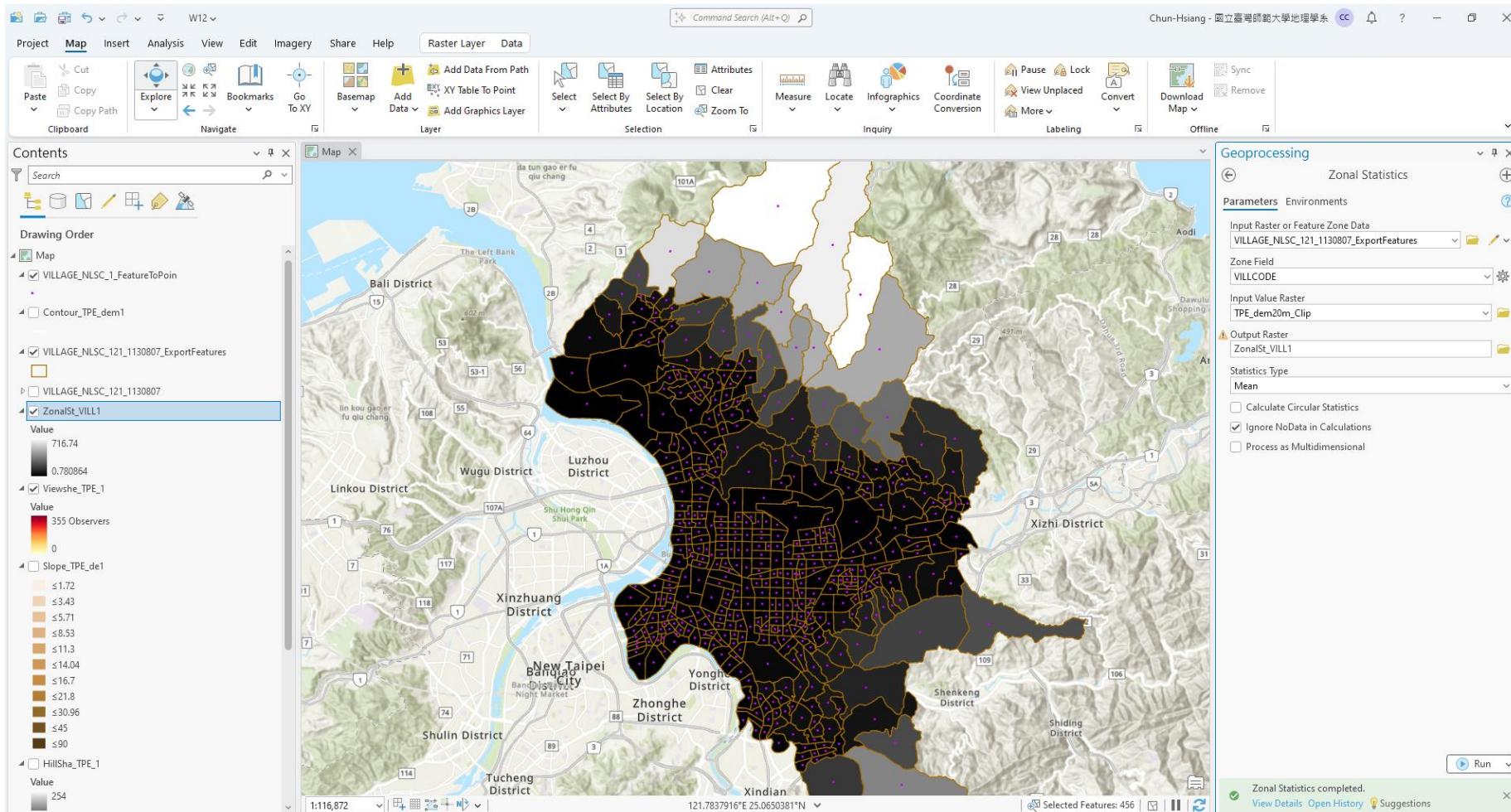
Zonal Statistics



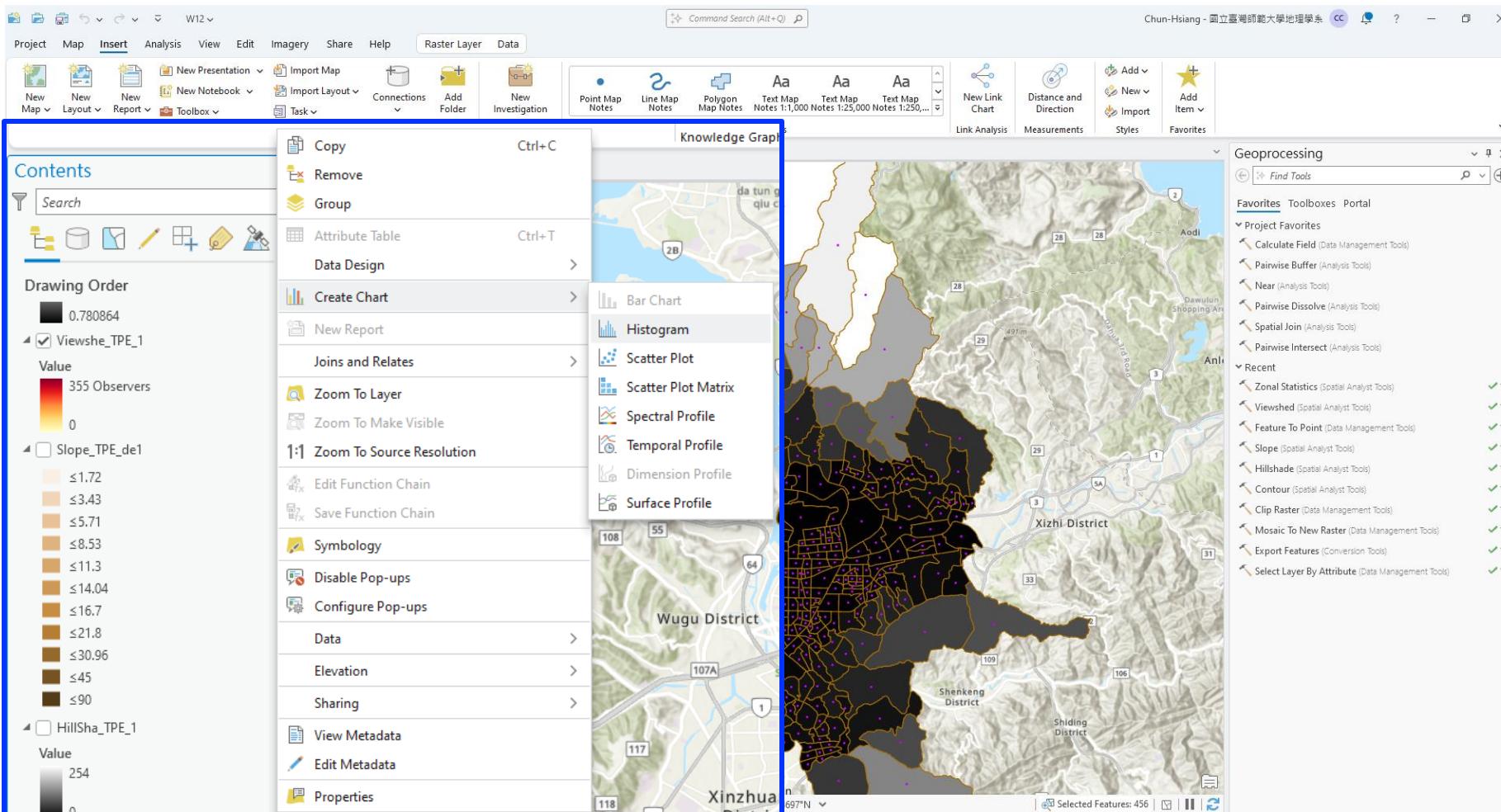
Zonal Statistics



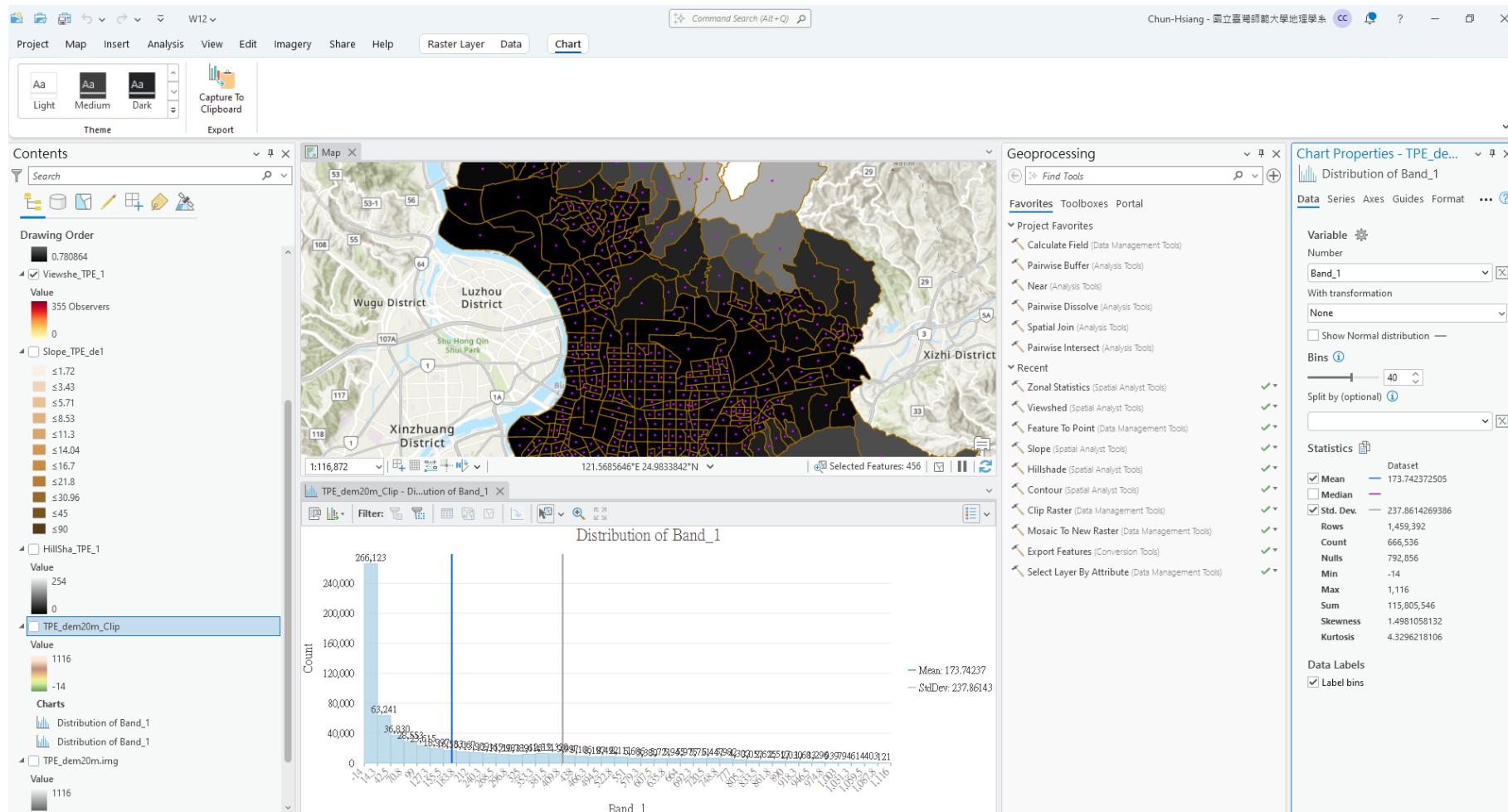
Zonal Statistics



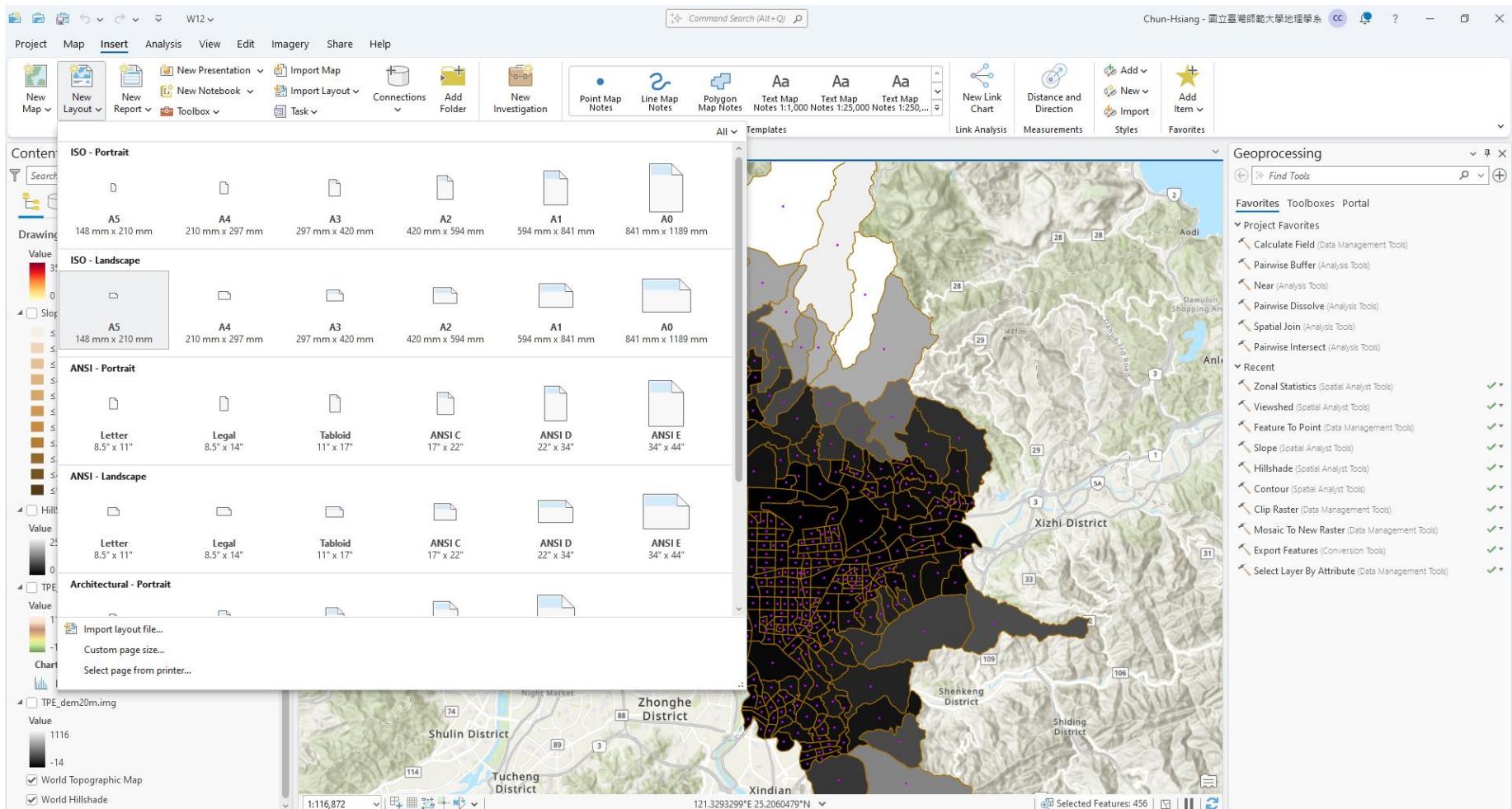
Create Chart | Histogram



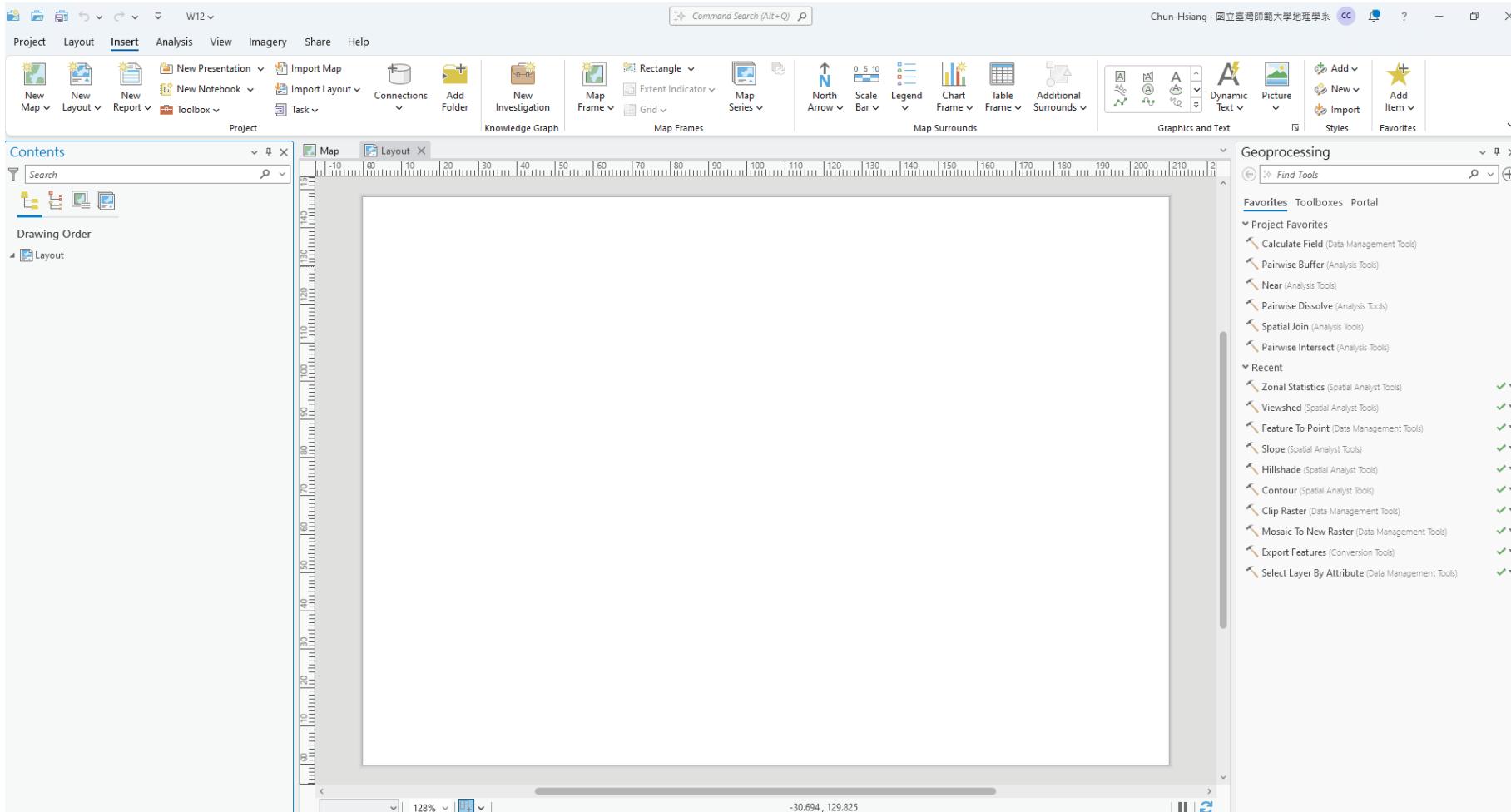
Create Chart | Histogram



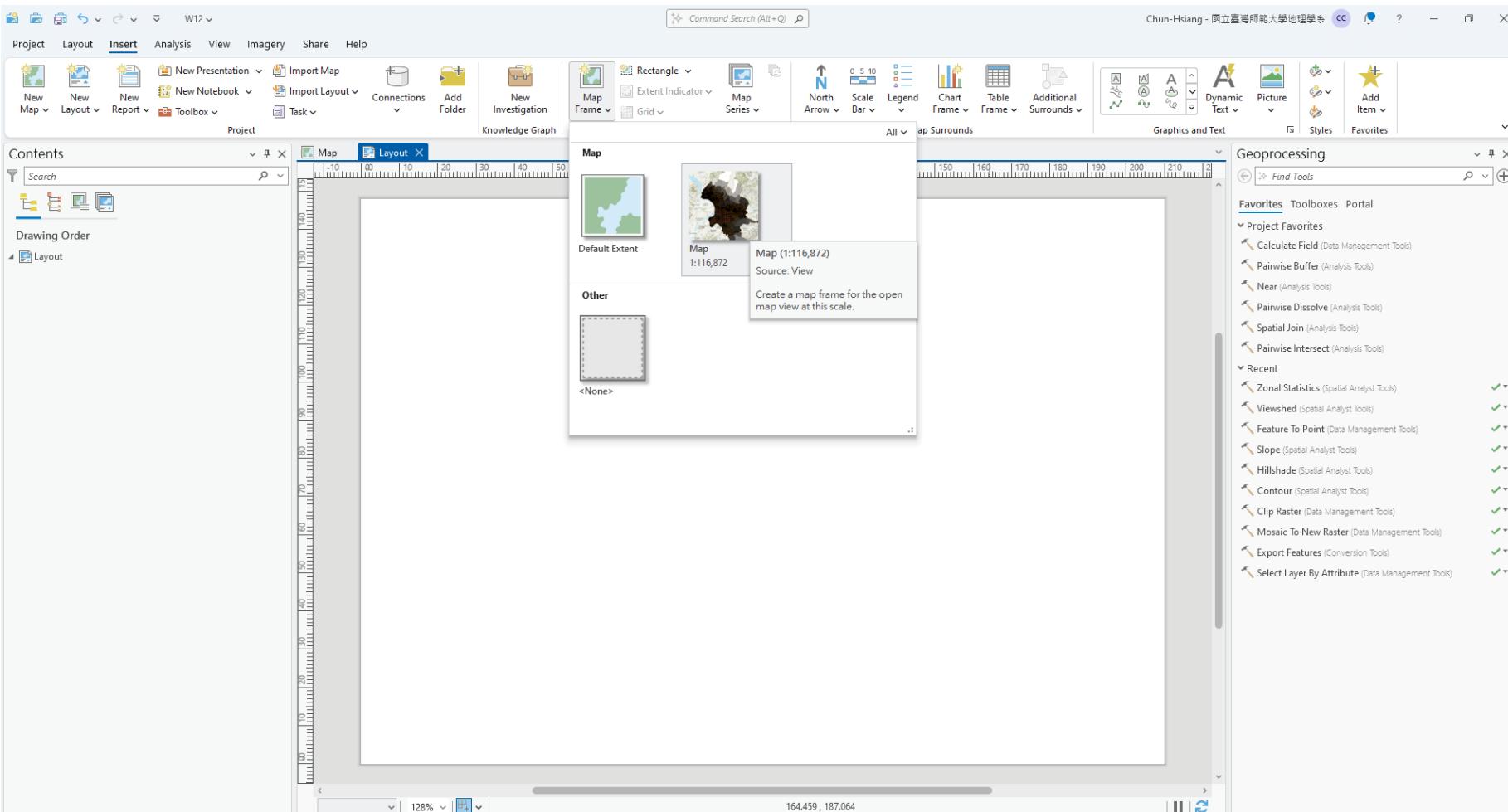
Map Layout



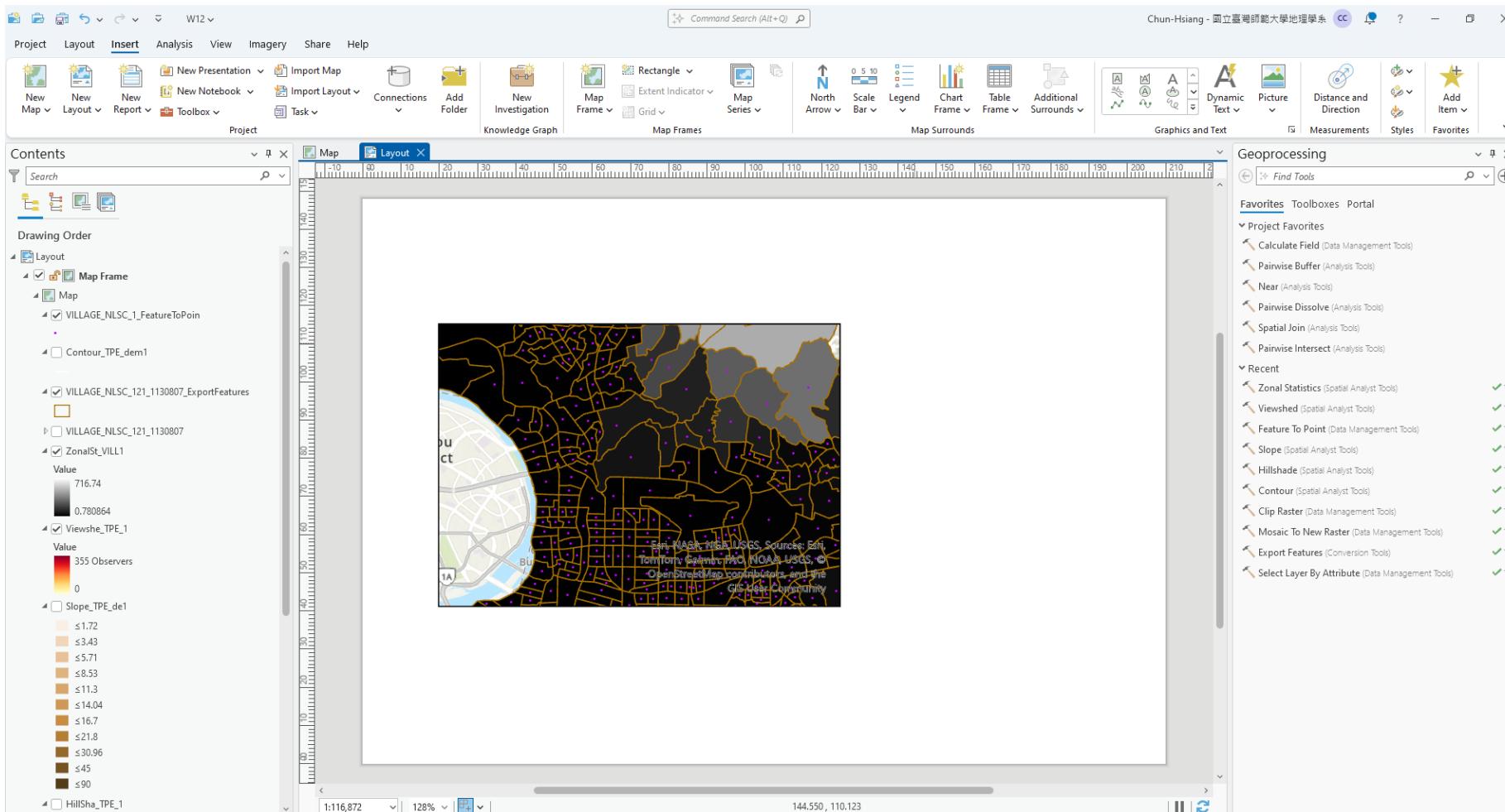
Map Layout



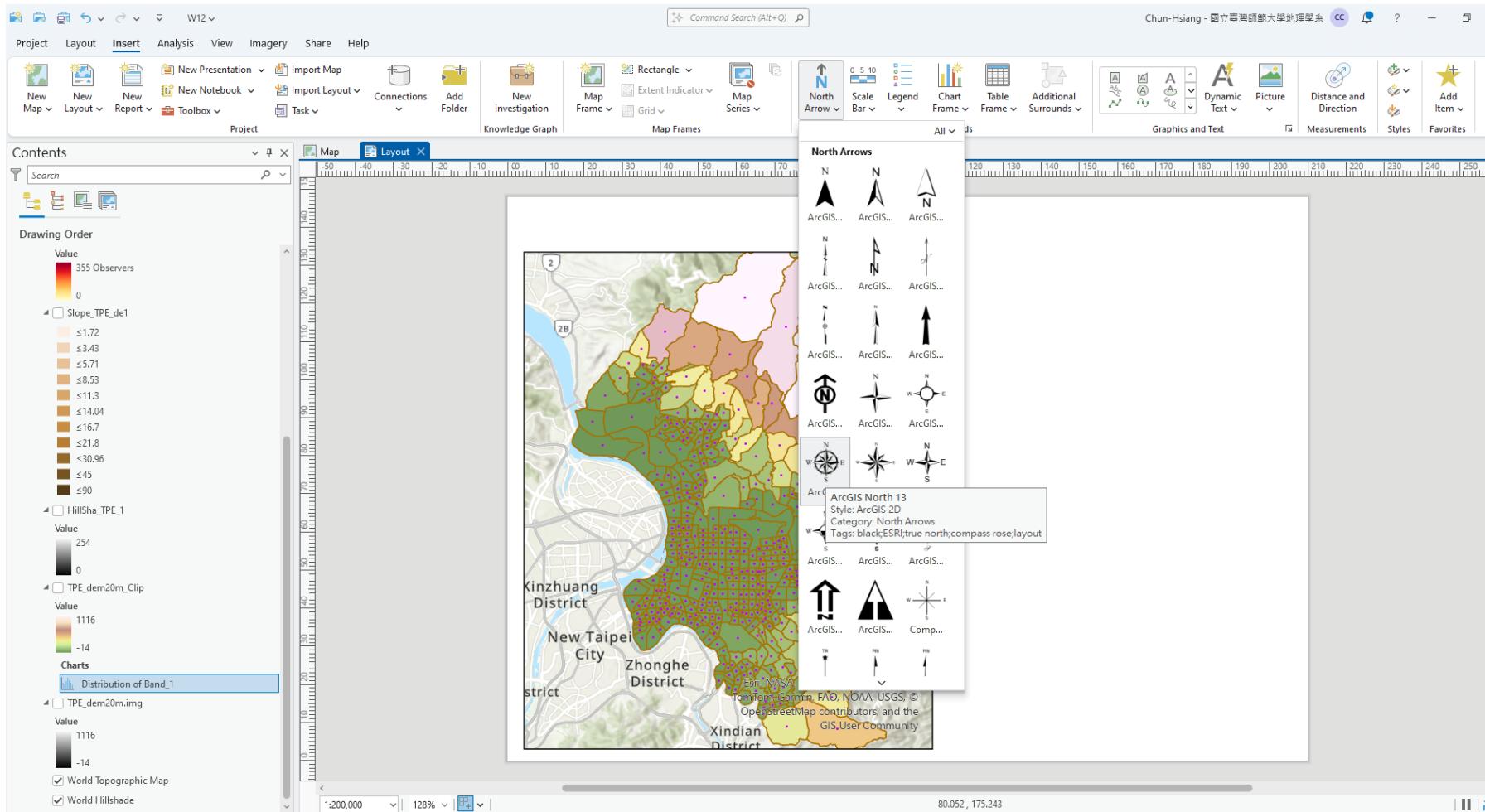
Map Layout



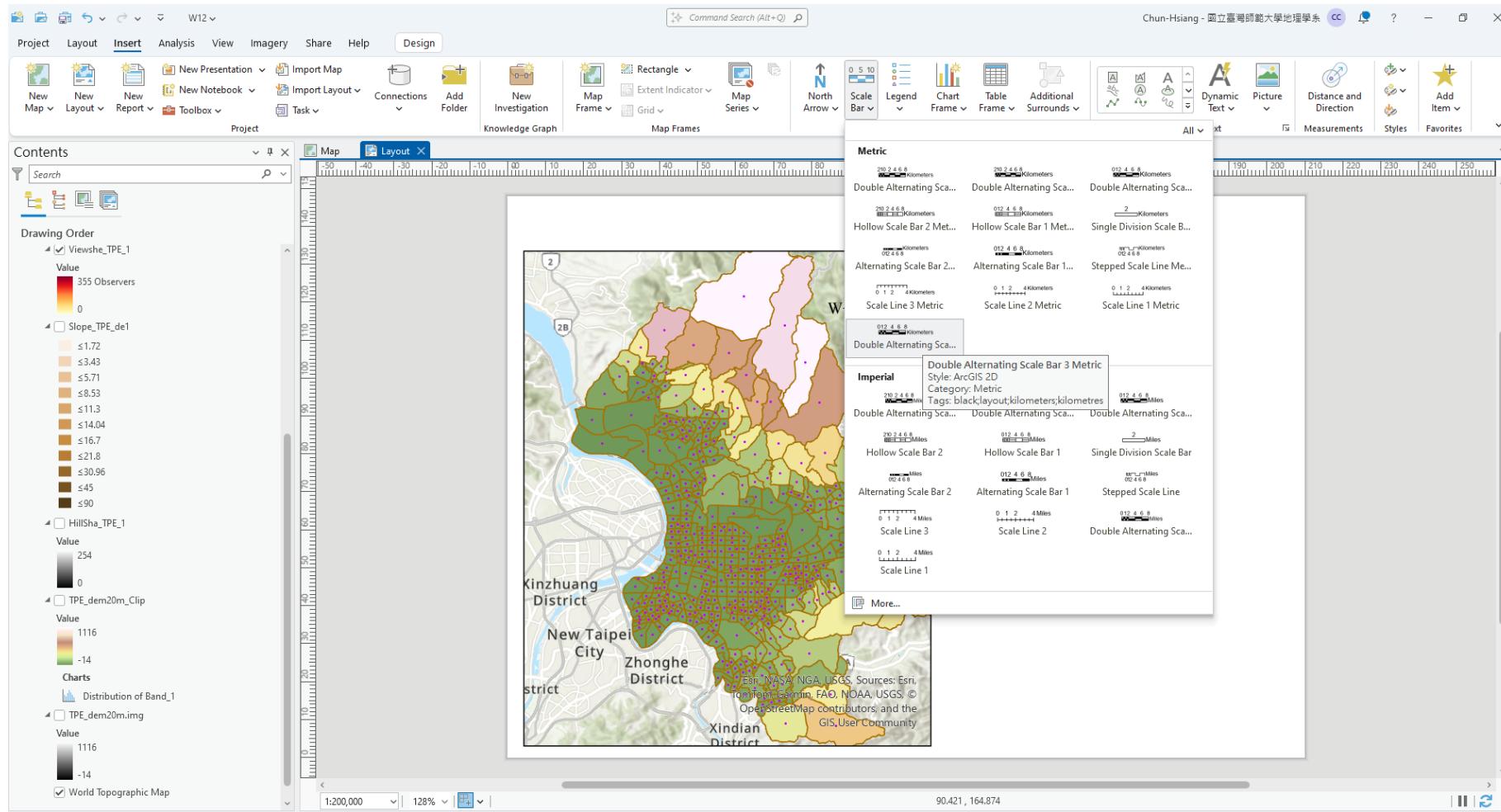
Map Layout



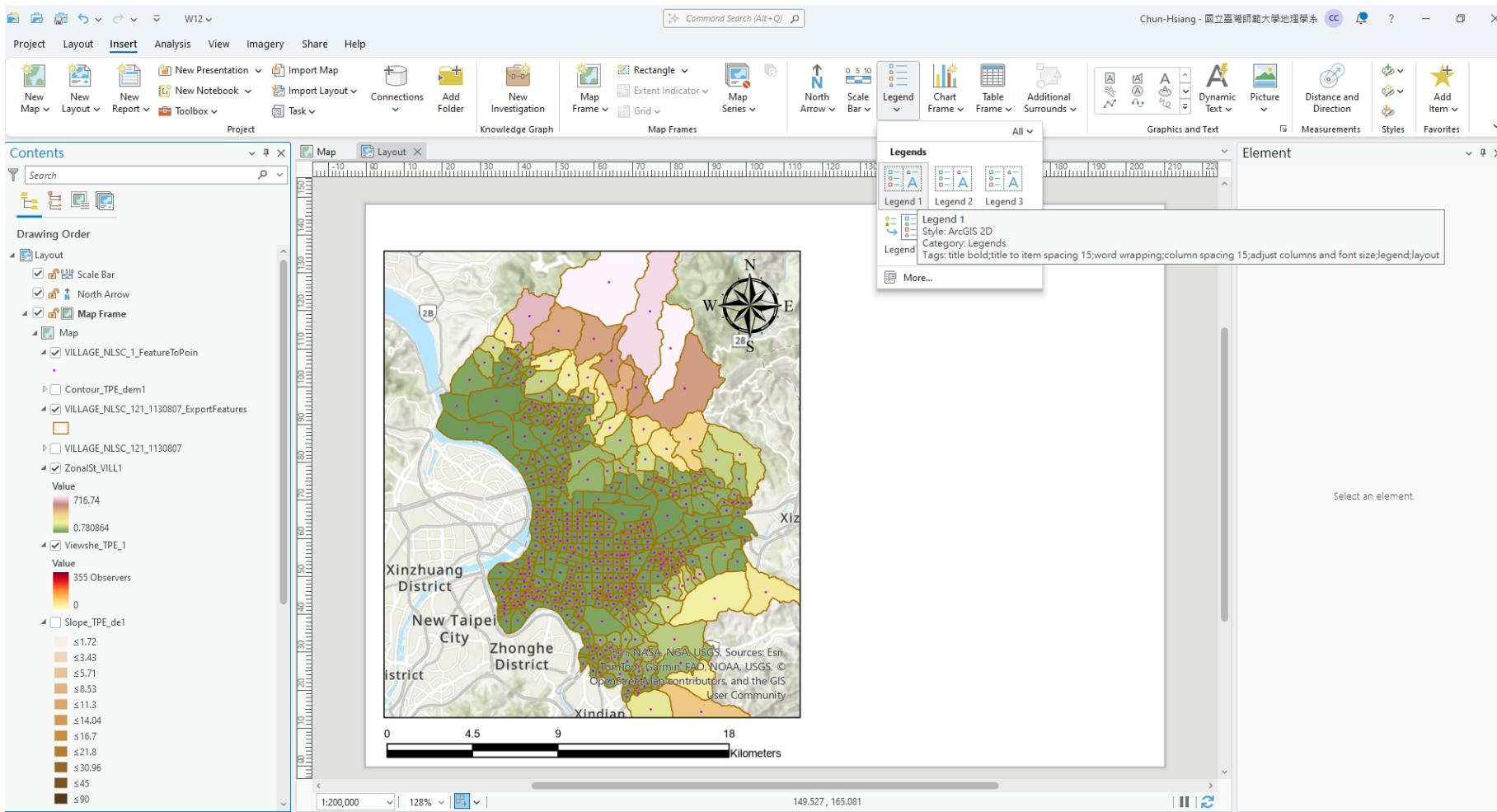
North Arrow



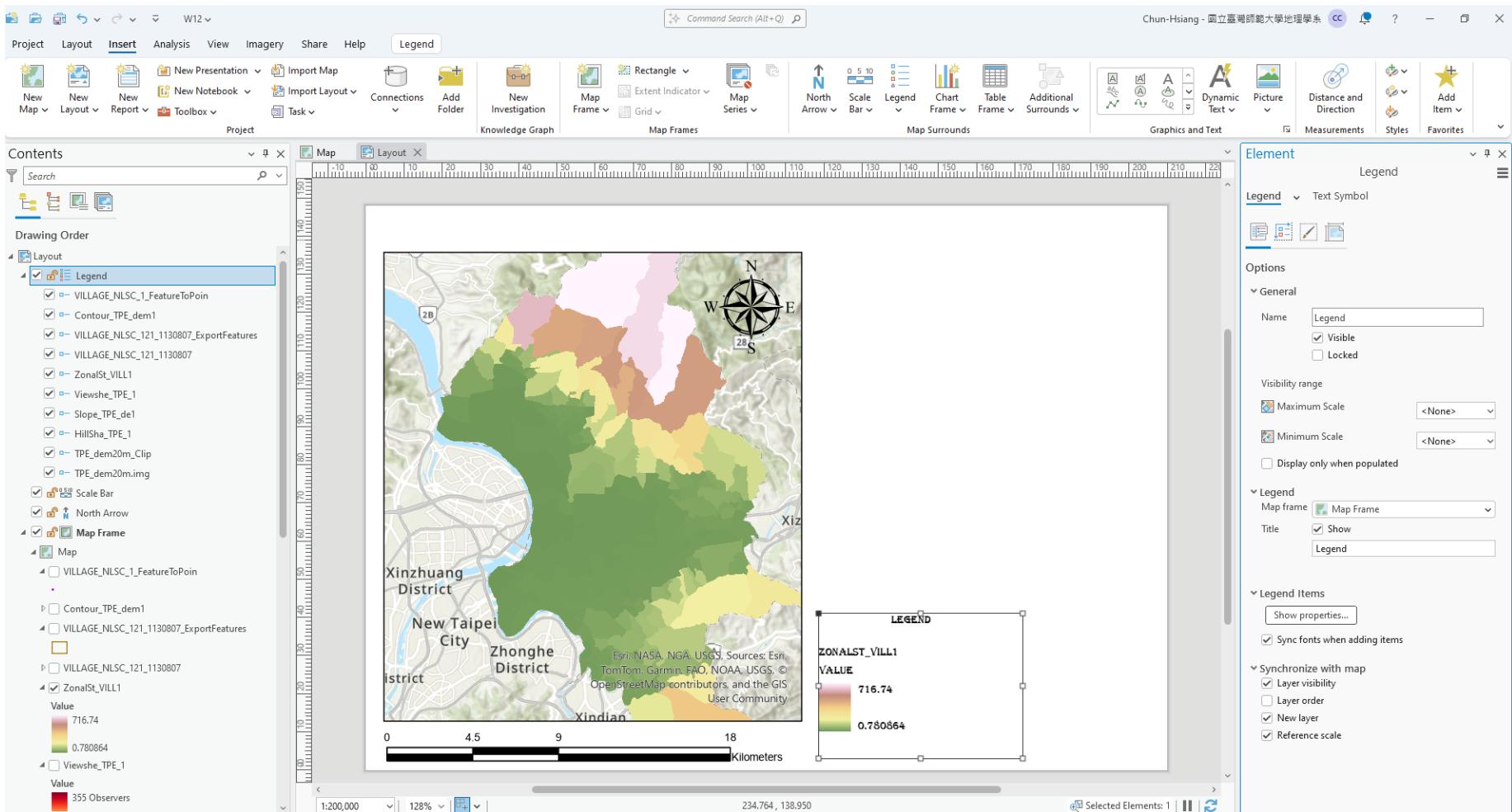
Scale Bar



Legend



Legend



Legend

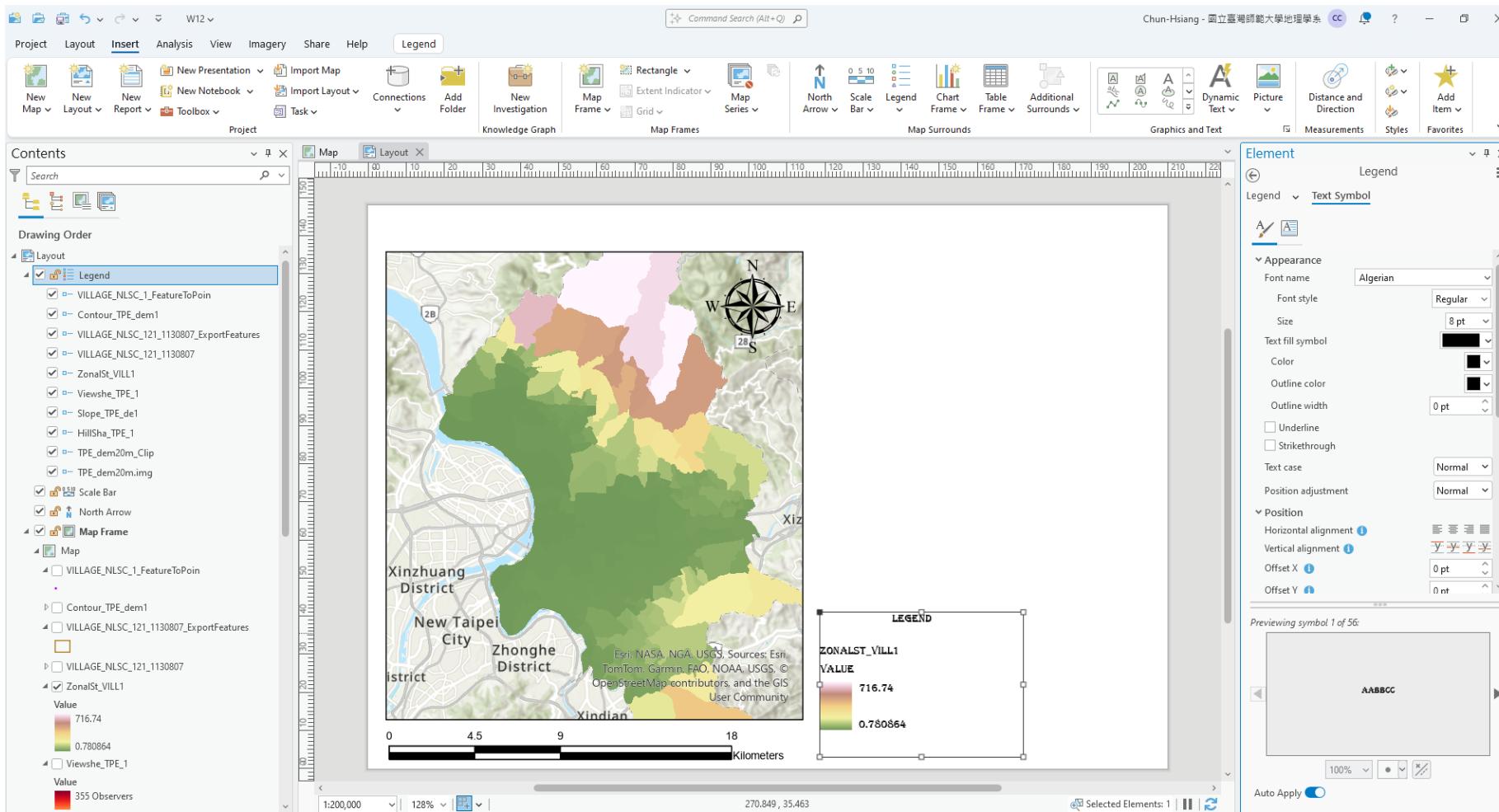


Chart Frame

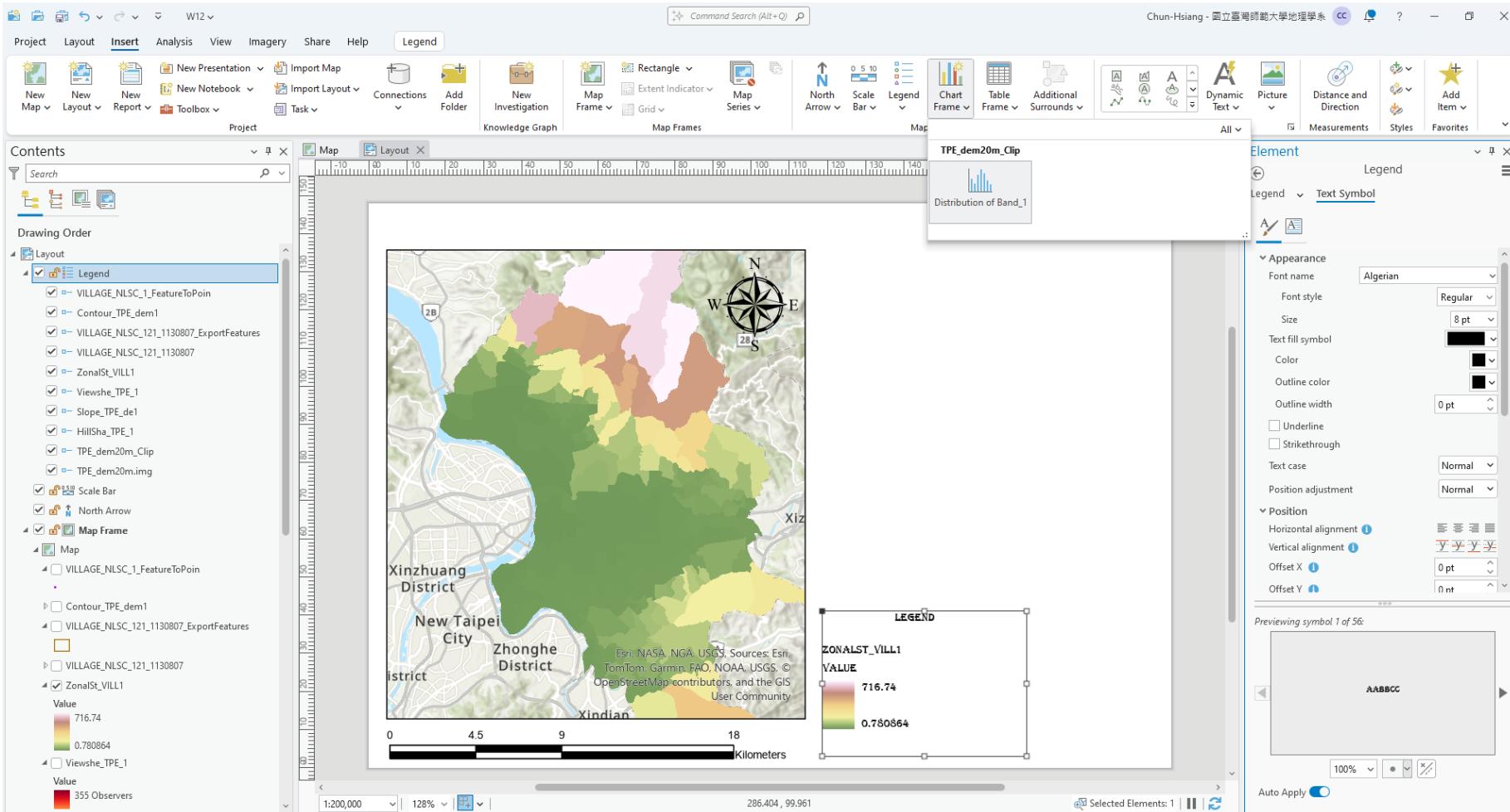


Chart | Text and Font

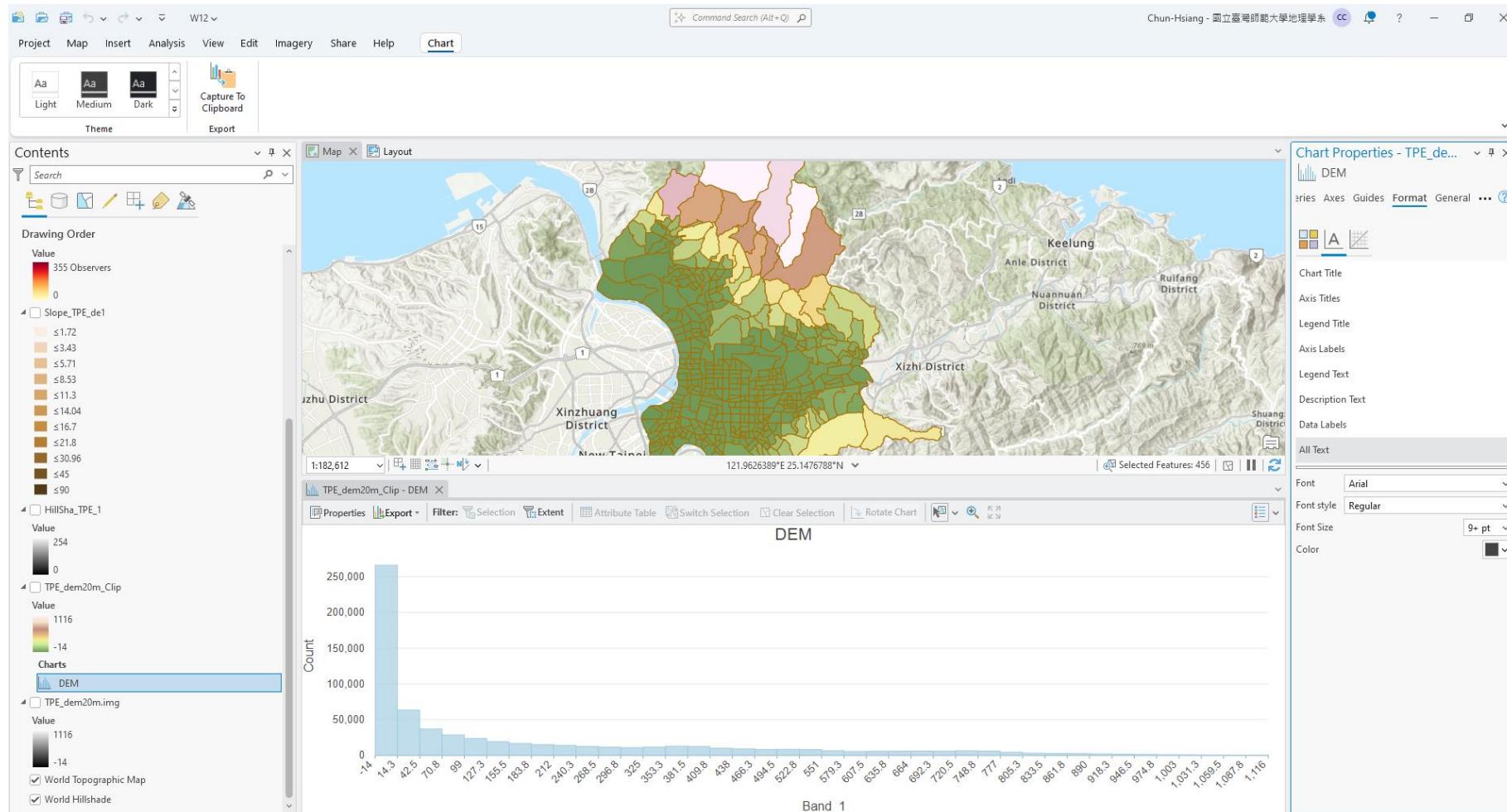


Chart Properties

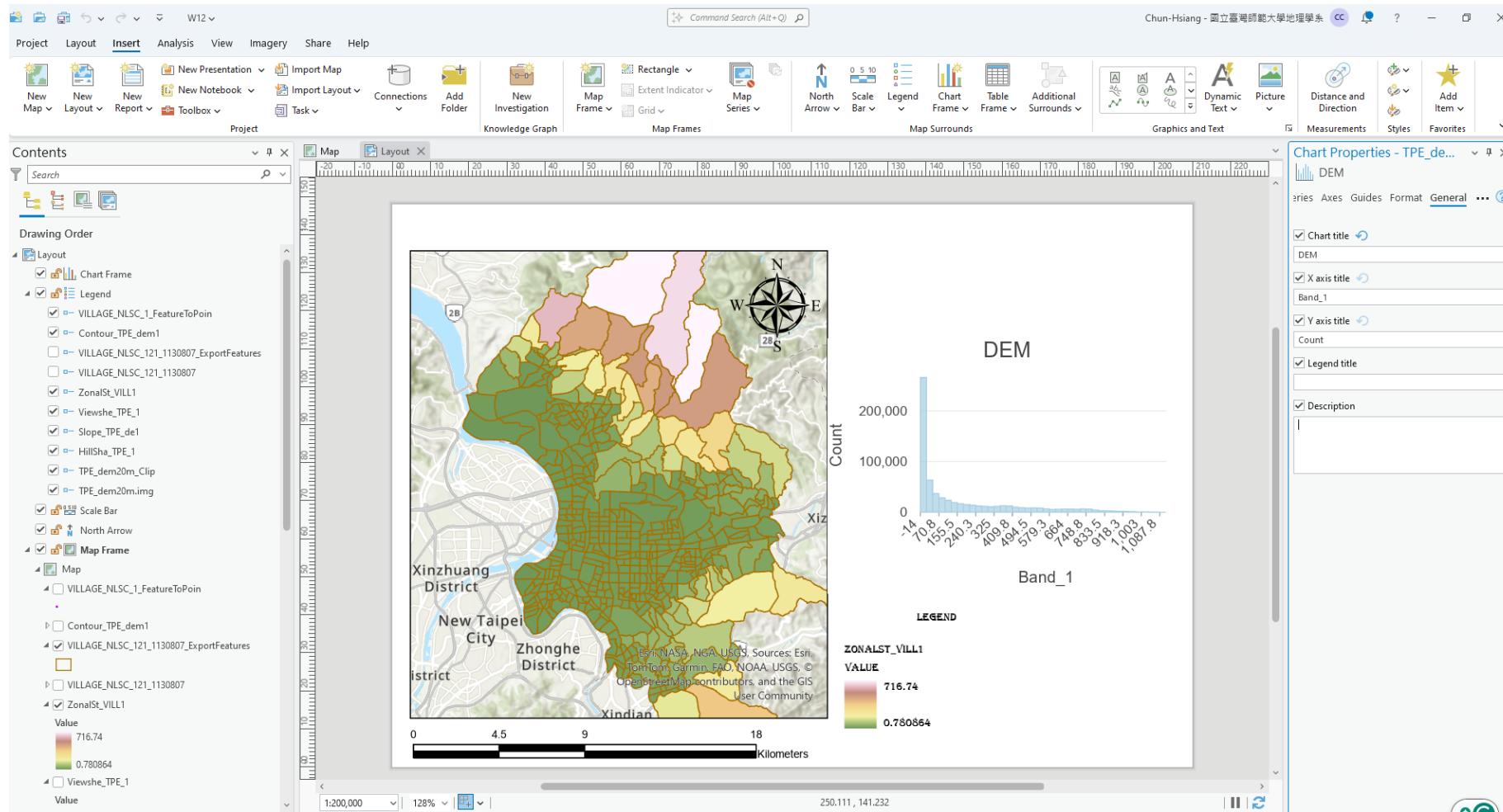
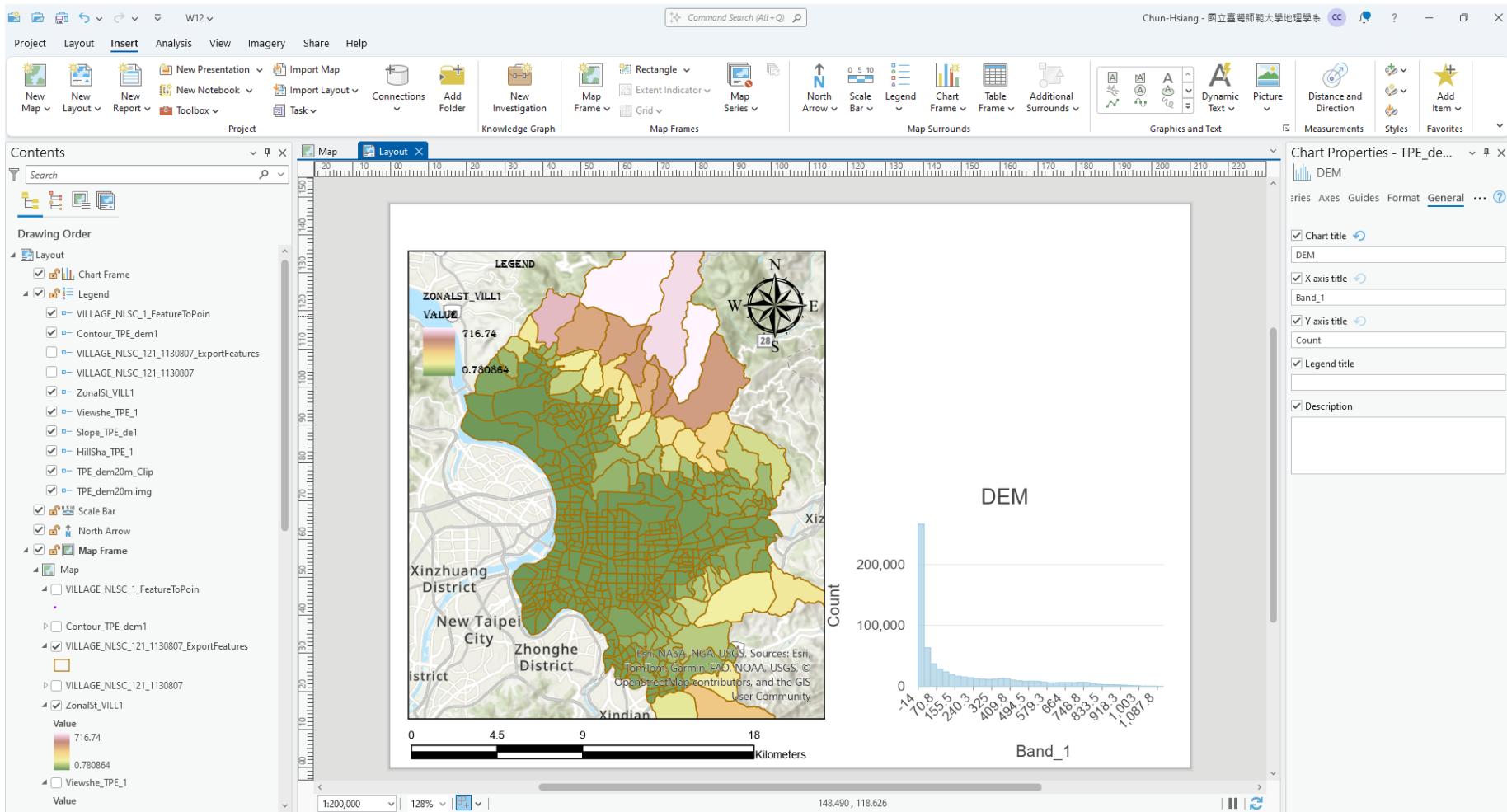
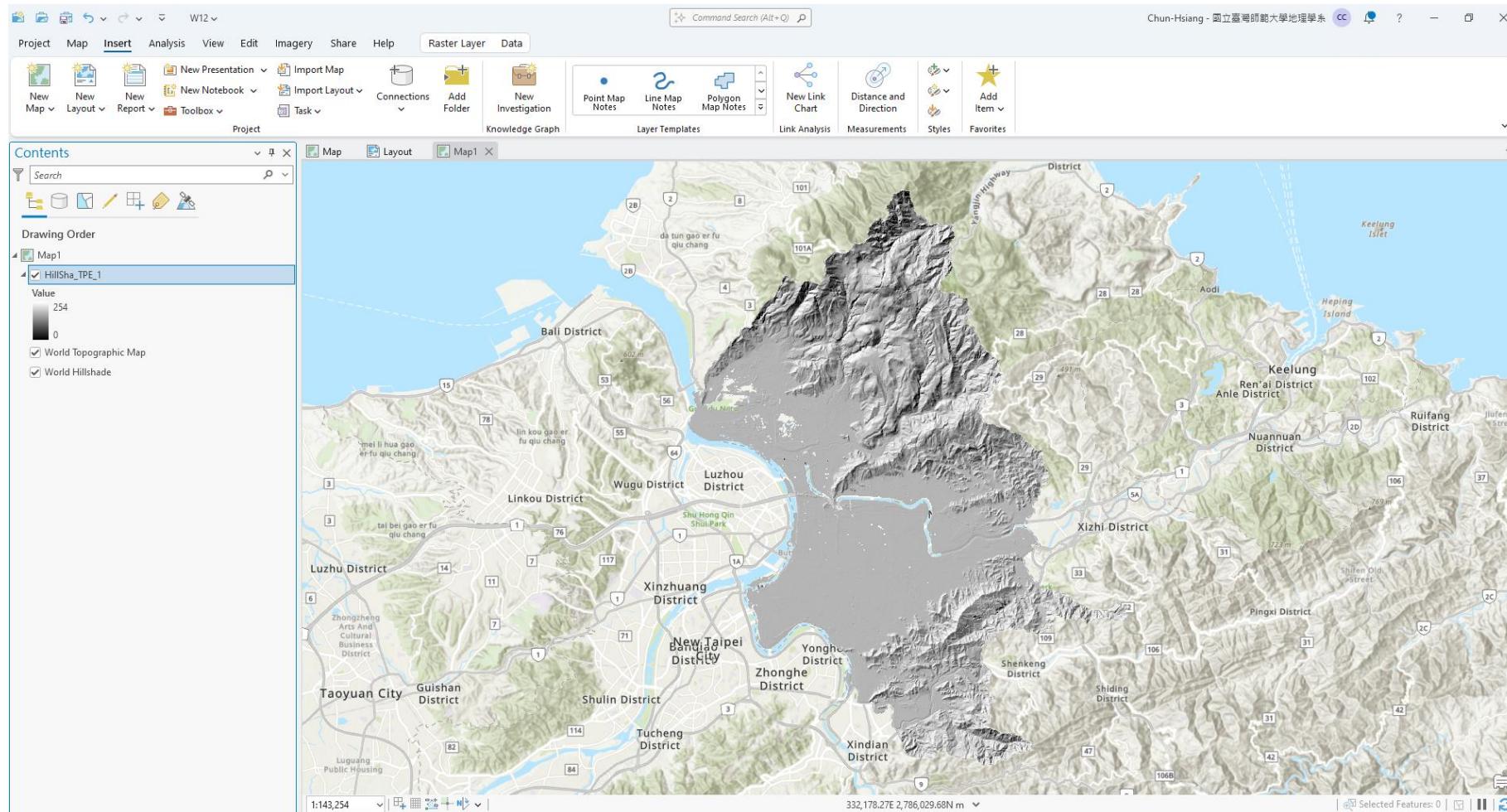


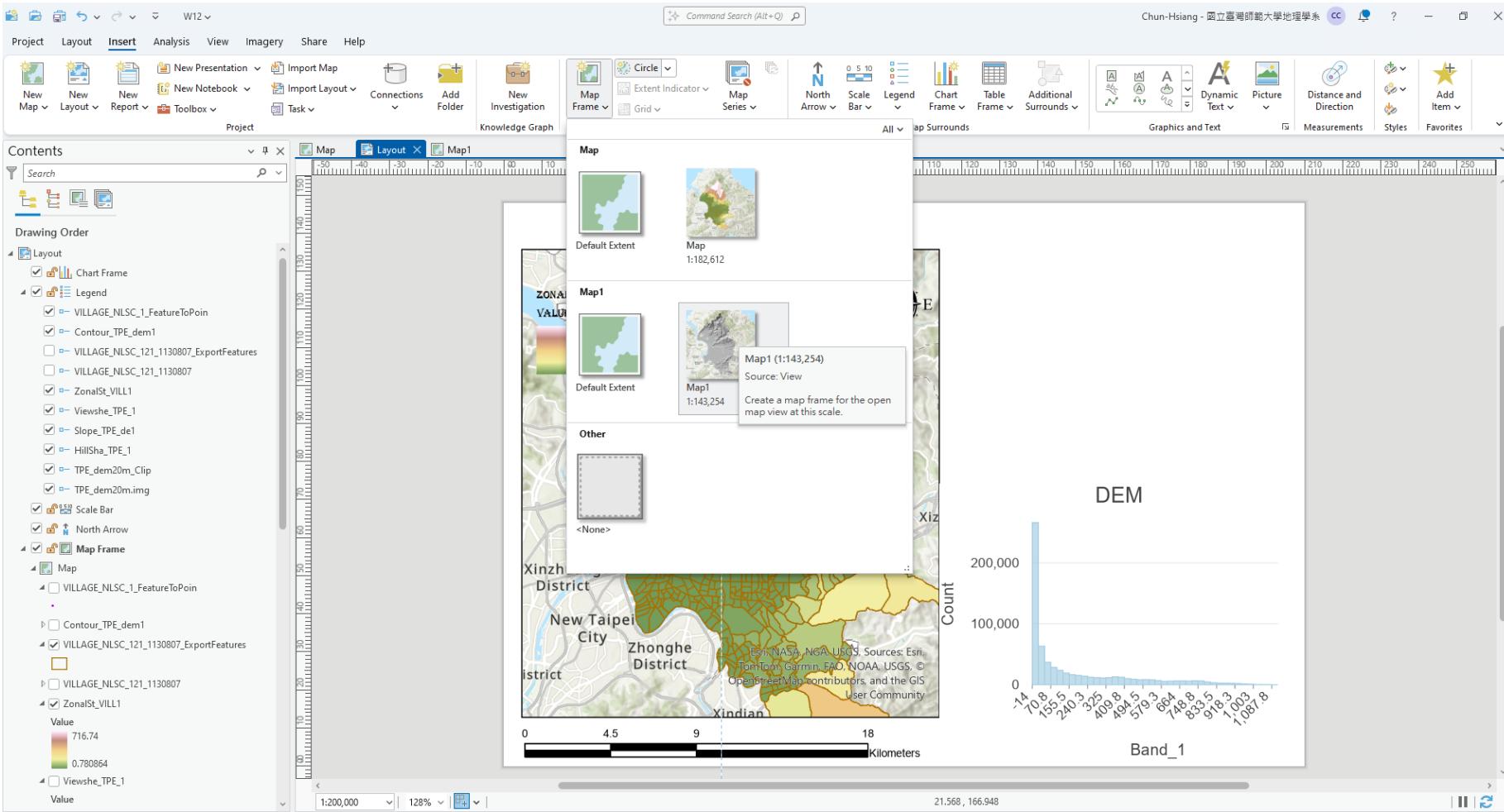
Chart Properties | Title



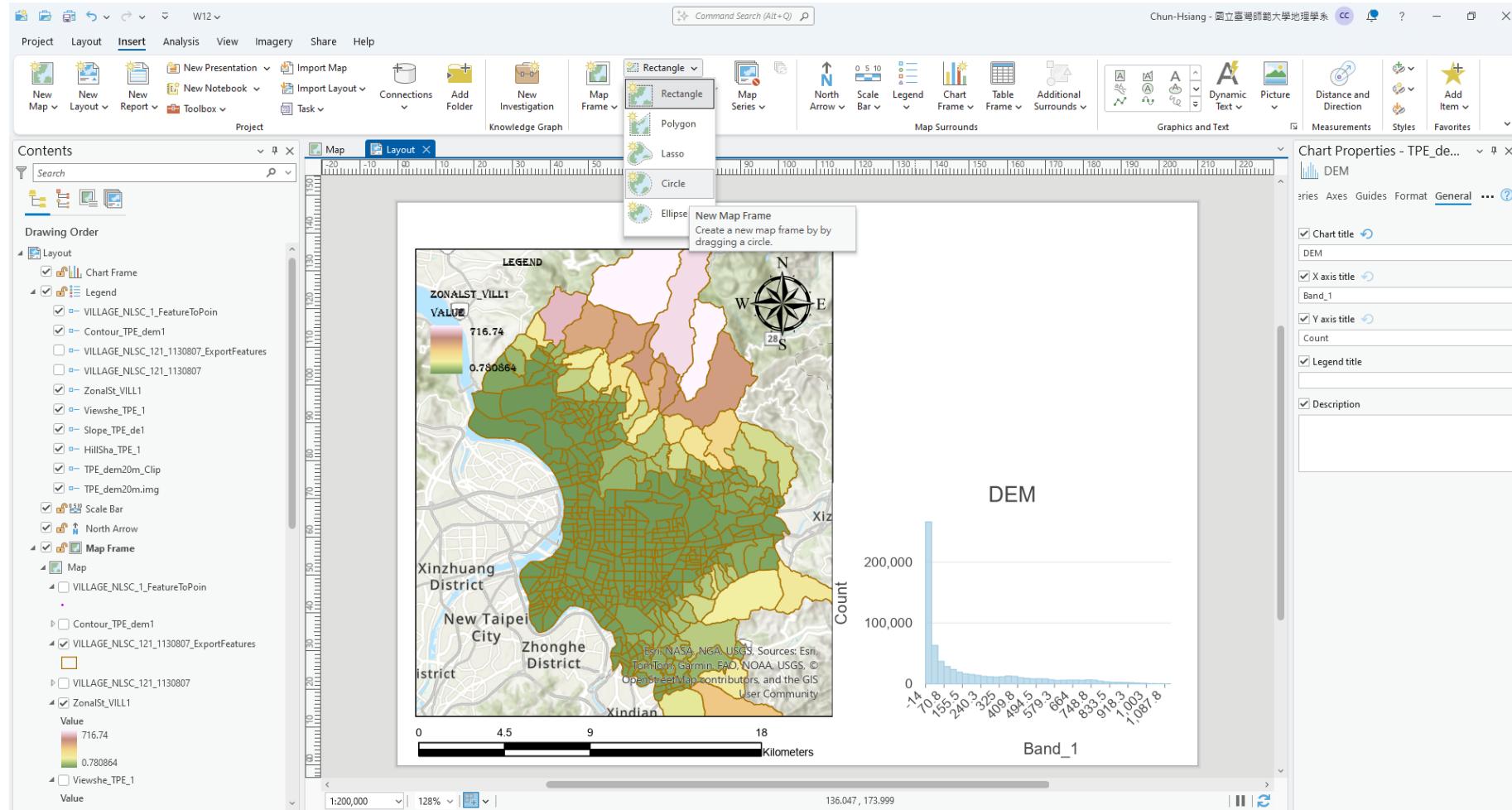
New Map | Add Hillshade



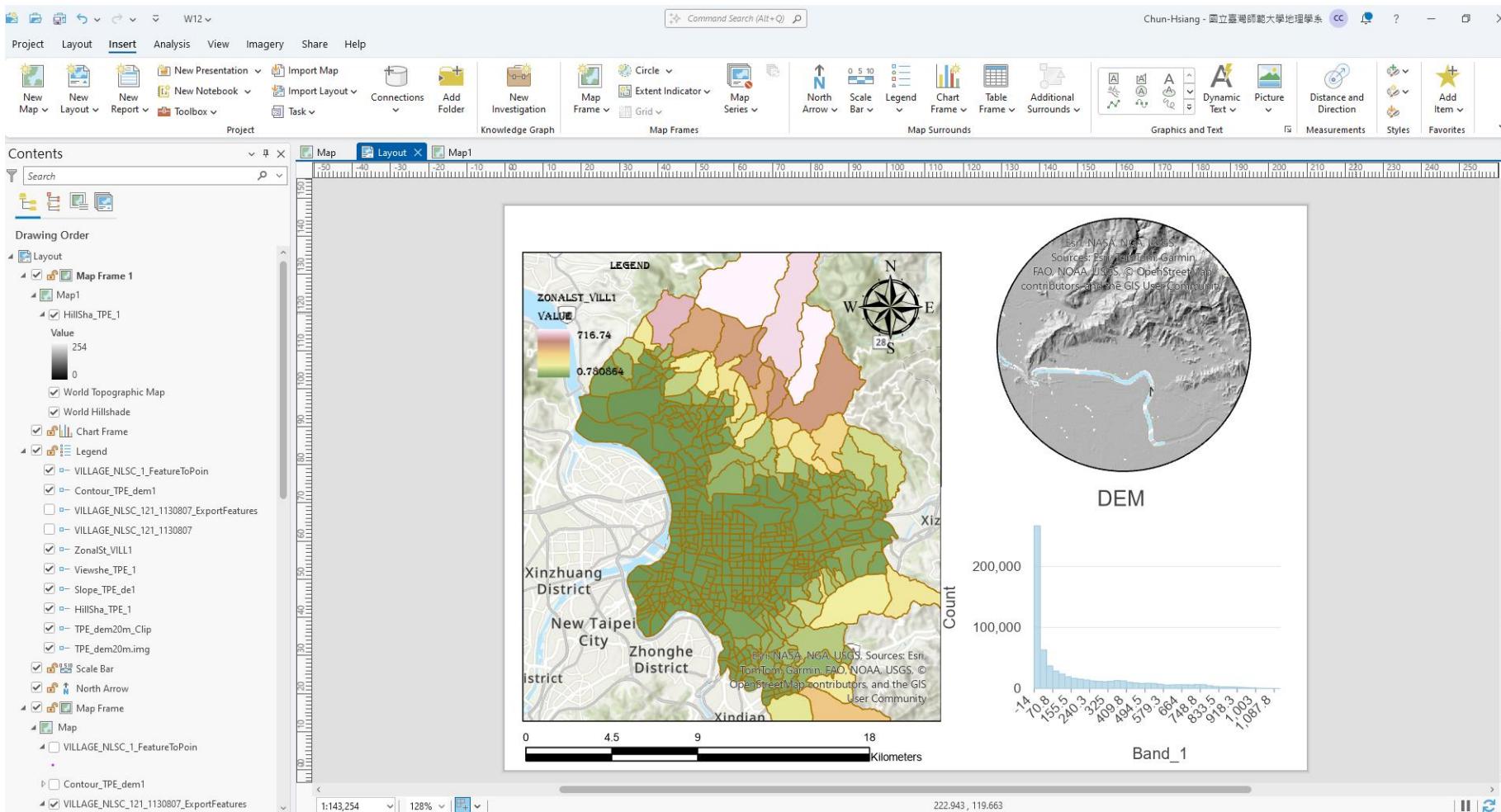
Add Map Frame



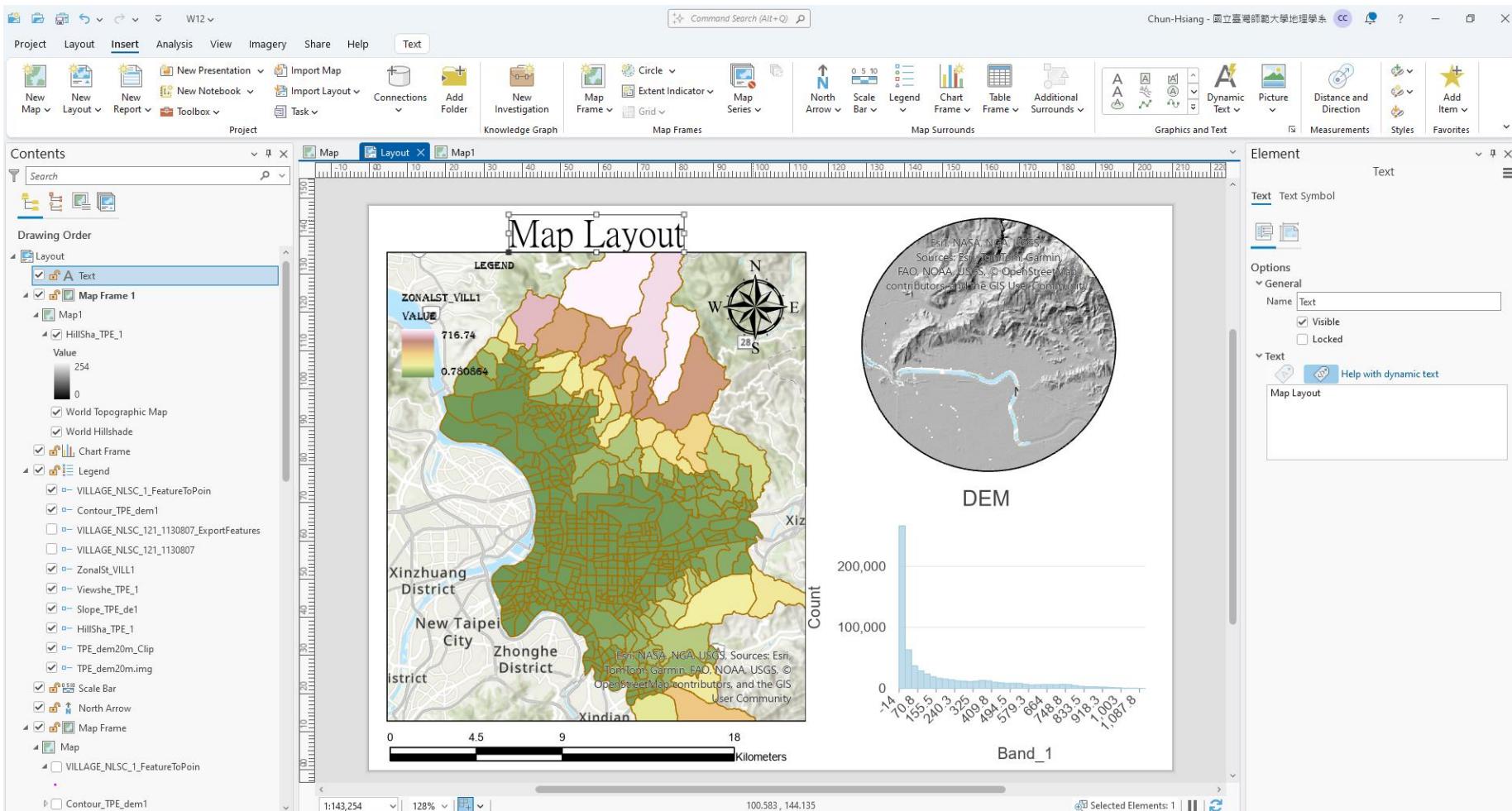
Add Map Frame | Circle



Map Layout



Add Text



Add Text

The screenshot shows the ArcGIS Pro interface with the 'Text' tool selected in the ribbon. The left pane displays the 'Contents' view with a tree structure of map elements. The main workspace contains a map of New Taipei City with several data layers, a DEM visualization, and a histogram titled 'Band_1'. The 'Element' pane on the right provides settings for the selected 'Text' element, including font (Arial, 28 pt), color (black), and position.

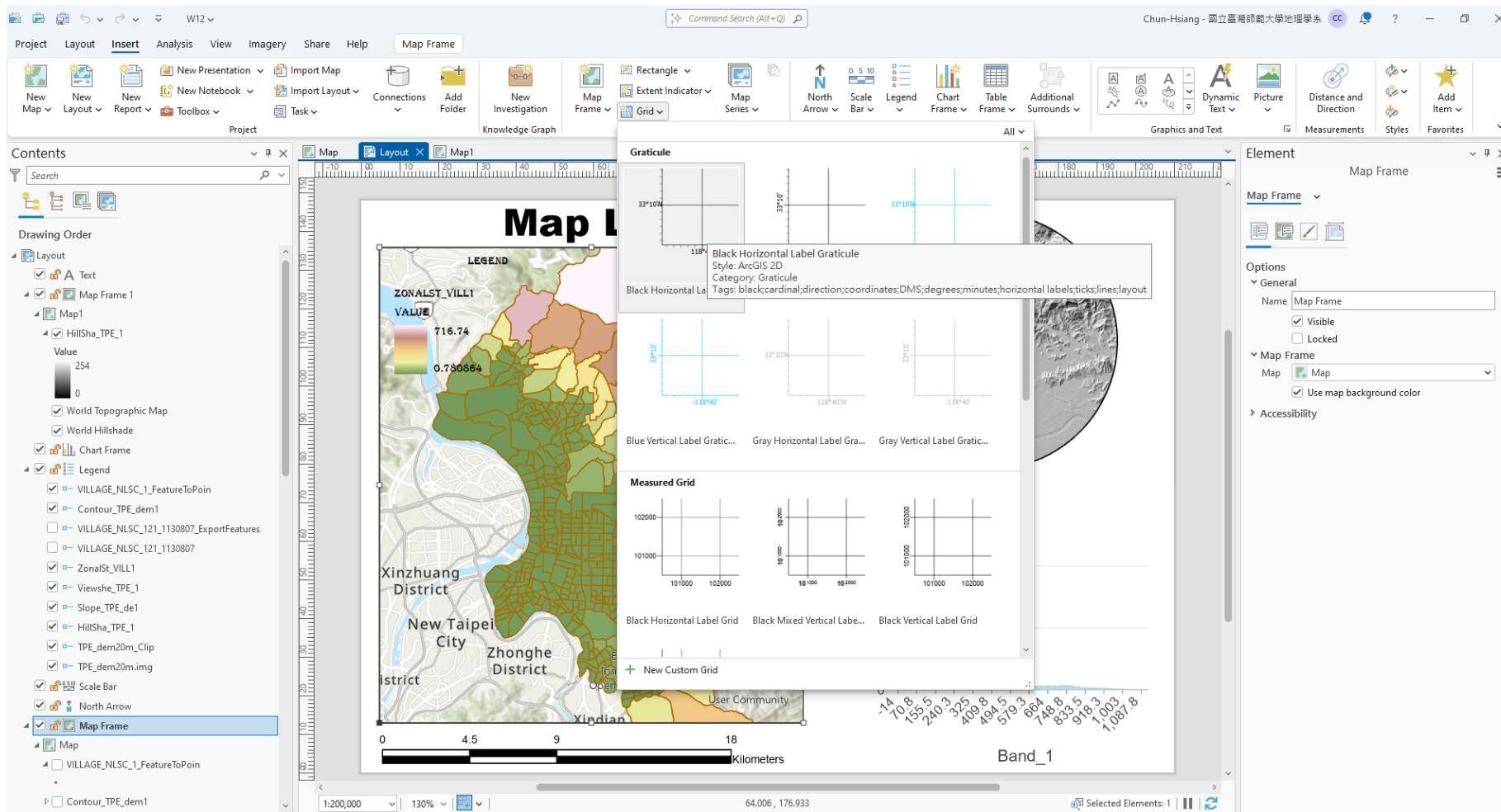
Map Layout Elements:

- Map Frame 1:** Contains:
 - Map1:** Includes HillSha_TPE_1 (Value: 254), World Topographic Map, World Hillshade, Chart Frame, Legend (VILLAGE_NLSC_1_FeatureToPoint, Contour_TPE_dem1, VILLAGE_NLSC_121_1130807_ExportFeatures, VILLAGE_NLSC_121_1130807, ZonalSt_VILL1, Viewshe_TPE_1, Slope_TPE_de1, Hillsha_TPE_1, TPE_dem20m_Clip, TPE_dem20m.img).
 - Scale Bar:**
 - North Arrow:**
 - Map Frame:**
 - Map:** Includes VILLAGE_NLSC_1_FeatureToPoint.
- Map Frame 2:** Contains:
 - Map:** Includes Contour_TPE_dem1.

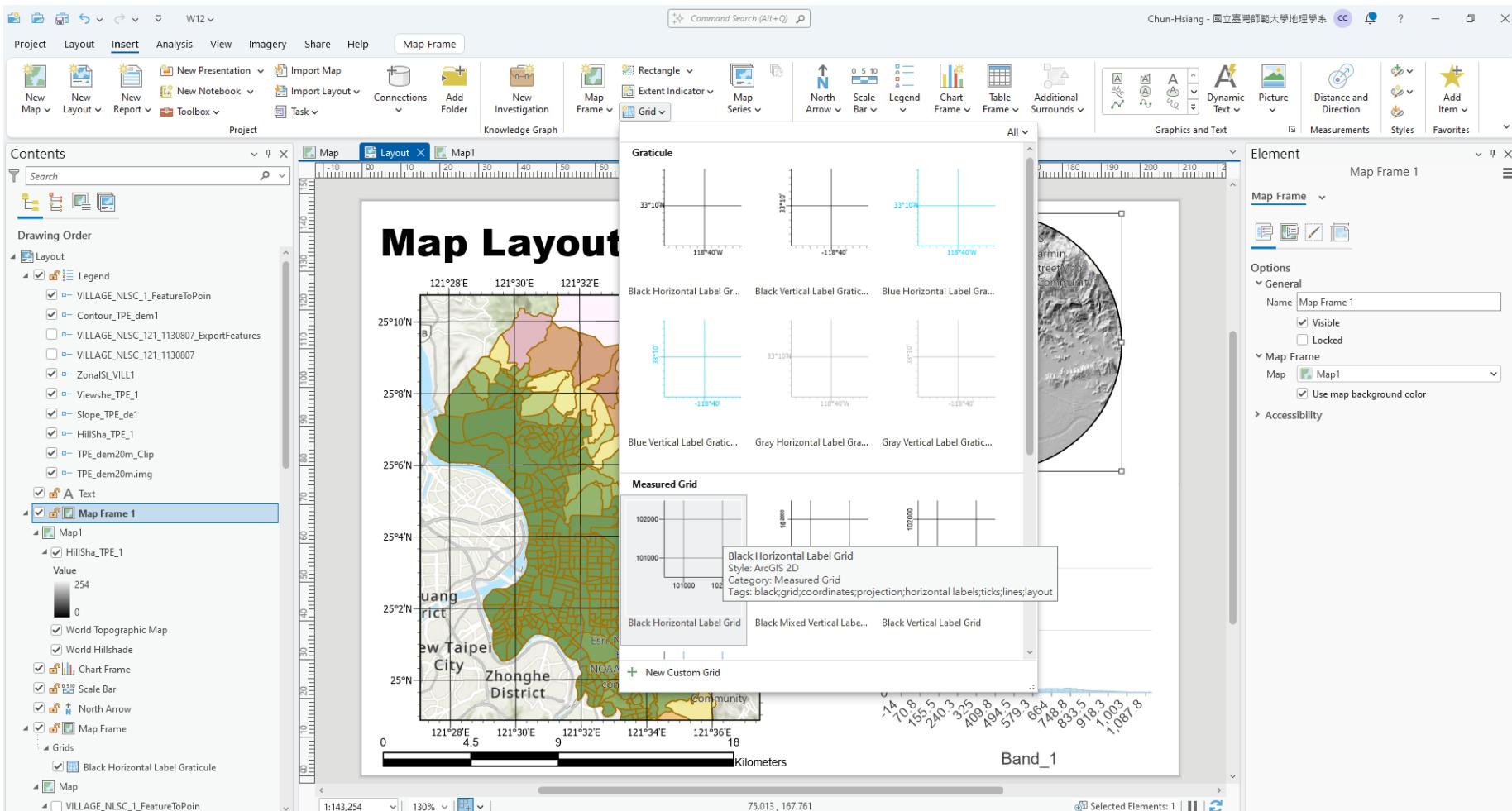
Element Properties (Text):

- Text:** Text Symbol
- Appearance:** Font name: Arial, Font style: Black, Size: 28 pt, Text fill symbol: black, Color: black, Outline color: black, Outline width: 0 pt, Underline: unchecked, Strikethrough: unchecked, Text case: Normal, Position adjustment: Normal.
- Position:** Horizontal alignment: Left, Vertical alignment: Top, Offset X: 0 pt, Offset Y: 0 pt.

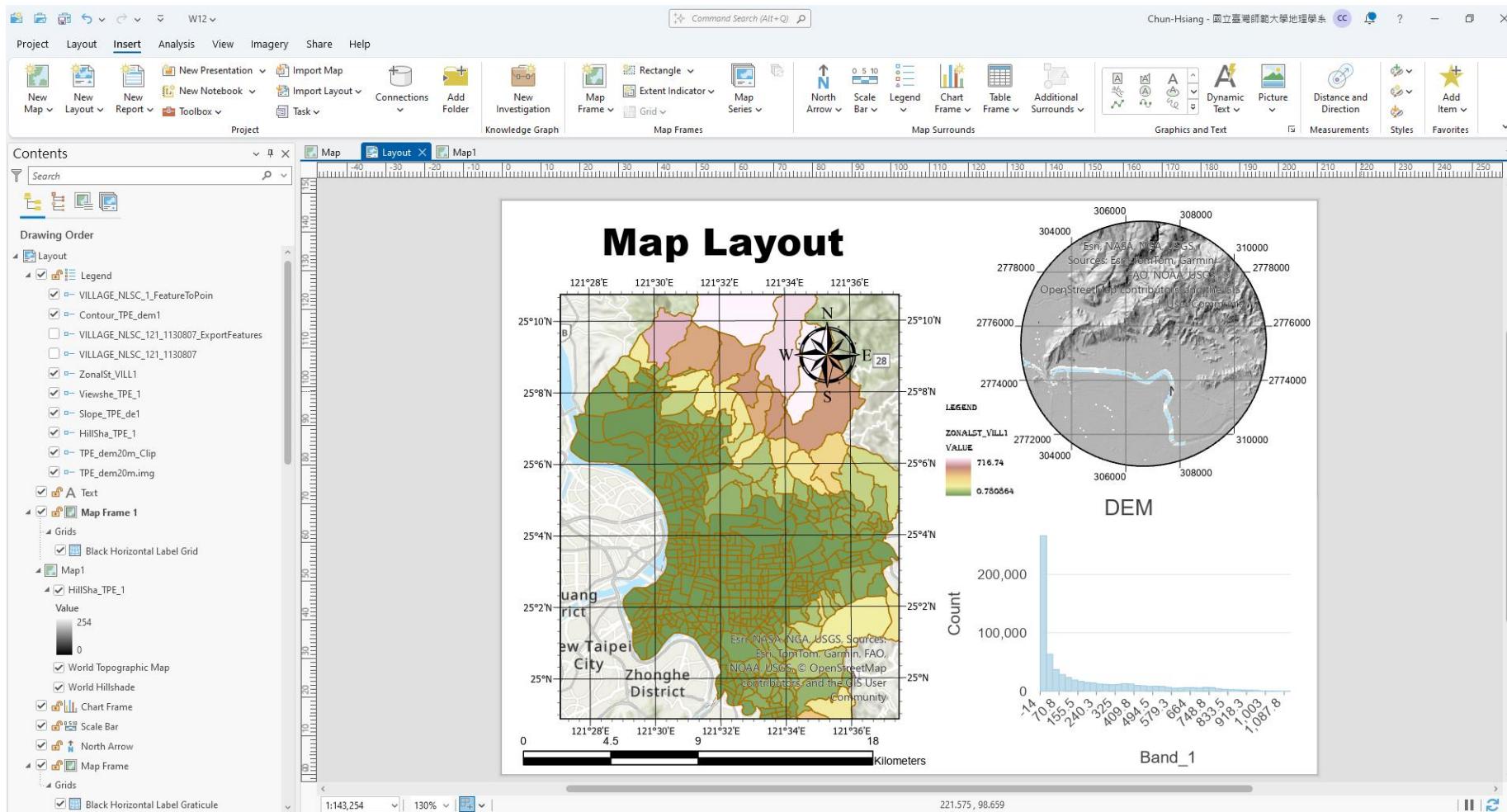
Add Graticule



Add Measured Grid



Final



The End

Thank you for your attention!

| Email: chchan@ntnu.edu.tw
Web: toodou.github.io